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ABSTRACT

This edition is the 25th report in a series that began in 1964. It revises the previous edition and includes statistics on elementary and secondary schools and institutions of higher education at the national level. Included are projections for enrollment, graduates, classroom teachers, and expenditures to the year 2006. Projections are also included for elementary and secondary enrollment and high school graduates to the year 2006 for public schools at the state level. Projections in this report reflect the 1990 Census and 1994 estimates and recent assumptions about the fertility rate, net immigration, and mortality rate. A methodology section describes models and assumptions used to develop the national projections, including age-specific models, exponential smoothing models, and econometric models. Most of the projections include three alternatives, based on different assumptions about growth. The first set of alternatives is designed to represent the most likely projections, but the high and low estimates provide a reasonable range of outcomes. Among the notable projections is that total public and private elementary enrollment is projected to increase over the period, with enrollment increases in elementary, secondary, and higher education. Four technical appendixes provide information about projection methodology, supplementary tables, data sources, and a glossary. (Contains 1 chart, 70 figures, 52 tables, 27 tables in Appendix A, and 12 tables in Appendix B.) (Author/SLD)

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PROJECTIONS OF EDUCATION STATISTICS TO 2006

TWENTY-FIFTH EDITION

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NATIONAL CENTER FOR EDUCATION STATISTICS

PROJECTIONS OF EDUCATION STATISTICS TO 2006

TWENTY-FIFTH EDITION

William J. Hussar
Debra E. Gerald
National Center for Education Statistics

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Foreword

This edition of *Projections of Education Statistics to 2006* is the 25th report in a series begun in 1964. This report provides revisions of projections shown in *Projections of Education Statistics to 2005* and includes statistics on elementary and secondary schools and institutions of higher education at the national level. Included are projections for enrollment, graduates, classroom teachers, and expenditures to the year 2006.

In addition, this report includes projections of elementary and secondary enrollment and high school graduates to the year 2006 for public elementary and secondary schools at the state level. These projections were produced to provide researchers, policy analysts, and other customers with state-level projections developed with a consistent methodology. They are not intended to supplant detailed projections prepared in individual states.

The projections presented in this report reflect the 1990 census. The revised population projections developed by the Bureau of the Census reflect the incorporation of the 1994 estimates and latest assumptions for the fertility rate, net immigration, and mortality rate.

The report also contains a methodology section describing models and assumptions used to develop the national projections. The projections are based on an age-specific enrollment rate model, exponential smoothing models, and econometric models. The enrollment model uses population estimates and projections from the Bureau of the Census. The exponential smoothing models are based on the mathematical projection of past data patterns into the future. The econometric models use projections of exogenous variables from DRI/McGraw-Hill, an economic forecasting service. Therefore, assumptions regarding the population and the economy are the key factors underlying the projections of education statistics.

Most of the projections include three alternatives, based on different assumptions about growth paths. Although the first alternative set of projections (middle alternative) in each table is deemed to represent the most likely projections, the low and high alternatives provide a reasonable range of outcomes.

In the forecast summary, key demographic and economic assumptions are presented in chart 1 and selected education statistics are shown in figure 1. A summary of the projections is available in a pocket-sized folder, *Pocket Projections 2006*.

Susan W. Ahmed, Acting Associate Commissioner for
Statistical Standards and Methodology
February 1996

Acknowledgments

Projections of Education Statistics to 2006 was produced by the National Center for Education Statistics in the Statistical Standards and Methodology Division under the general direction of Susan W. Ahmed, Acting Associate Commissioner. The report was prepared by Debra E. Gerald, Mathematical Statistician, and William J. Hussar, Financial Economist.

Debra E. Gerald prepared national projections of the following: elementary and secondary enrollment (chapter 1); higher education enrollment (chapter 2); high school graduates (chapter 3); earned degrees conferred (chapter 4); and classroom teachers (chapter 5). She also prepared state-level projections of public elementary and secondary enrollment (chapter 8) and public high school graduates (chapter 9). In addition, she prepared the appendixes explaining the methodologies used to develop these projections and the data sources. William J. Hussar prepared the projections of expenditures of public elementary and secondary schools, including public school teacher salaries (chapter 6) and expenditures of institutions of higher education (chapter 7). Also, he developed the projections of age-specific enrollment rates for women enrolled in college. In addition, he prepared the appendixes explaining the methodologies used to obtain the expenditure projections, selected portions of the data sources, and glossary.

The technical review was done by Robert S. Burton of the National Center for Education Statistics. Valuable assistance was also provided by the following reviewers: Edward Hurley of the National Education Association; Gregory Spencer of the Bureau of the Census; Vance Grant of the National Library of Education; and William J. Fowler, Claire Geddes, and Thomas D. Snyder of the National Center for Education Statistics.

The cover was designed by Philip Carr, Media and Information Services, Office of Educational Research and Improvement.

Forecast Summary

Chart 1.—Summary of forecast assumptions to 2006

Variable	Middle alternative	Low alternative	High alternative
Demographic Assumptions			
Population	Projections are consistent with the Census Bureau middle series estimates, which assume a fertility rate of 2.09 births per woman by the year 2006, a net immigration of 820,000 per year, and a further reduction in the mortality rate.	Same as middle alternative	Same as middle alternative
18-24 year-old population	Average annual decline of 1.3% to 1996; average annual growth rate of 1.5% through 2006.	Same as middle alternative	Same as middle alternative
25-29 year-old population	Average annual decline of 0.3%	Same as middle alternative	Same as middle alternative
30-34 year-old population	Average annual decline of 1.8%	Same as middle alternative	Same as middle alternative
35-44 year-old population	Average annual growth rate of 0.0%	Same as middle alternative	Same as middle alternative
Public Elementary Enrollment	Average annual growth rate of 0.4%	Same as middle alternative	Same as middle alternative
Public Secondary Enrollment	Average annual growth rate of 1.5%	Same as middle alternative	Same as middle alternative
Undergraduate Enrollment	Average annual growth rate of 1.4%	Average annual growth rate of 0.4%	Average annual growth rate of 2.0%
Graduate Enrollment	Average annual growth rate of 0.6%	Average annual decline of 0.4%	Average annual growth rate of 1.5%
First-professional Enrollment	Average annual decline of 1.2%	Average annual decline of 0.5%	Average annual growth rate of 2.6%
Full-time-equivalent Enrollment	Average annual growth rate of 1.6%	Average annual growth rate of 0.5%	Average annual growth rate of 2.3%
Economic Assumptions			
Disposable Income per Capita in Constant Dollars	Annual percent changes range between 1.2% and 1.7% with an annual compound growth rate of 1.3%.	Annual percent changes range between 0.1% and 1.6% with an annual compound growth rate of 0.7%.	Annual percent changes range between 1.4% and 2.3% with an annual compound growth rate of 1.8%.
Education Revenue Receipts from State Sources per Capita in Constant Dollars	Annual percent changes range between 0.0% and 2.8% with an annual compound growth rate of 1.5%.	Annual percent changes range between 0.2% and 2.2% with an annual compound growth rate of 0.9%.	Annual percent changes range between 1.1% and 3.8% with an annual compound growth rate of 2.0%.
Inflation Rate	Inflation rate ranges between 3.0% and 4.1%.	Inflation rate ranges between 3.5% and 5.1%.	Inflation rate ranges between 2.5% and 4.1%.
Personal Taxes and Nontax Receipts to State and Local Governments per Capita in Constant Dollars	Annual percent changes range between 0.9% and 2.5% with an annual compound growth rate of 1.8%.	Annual percent changes range between 1.1% and 1.9% with an annual compound growth rate of 1.3%.	Annual percent changes range between 0.9% and 3.5% with an annual compound growth rate of 2.4%.
Indirect Business Taxes and Tax Accruals (Excluding Property Taxes) to State and Local Governments per Capita in Constant Dollars	Annual percent changes range between 0.8% and 2.4% with an annual compound growth rate of 1.3%.	Annual percent changes range between –0.4% and 1.8% with an annual compound growth rate of 0.6%.	Annual percent changes range between 1.0% and 3.7% with an annual compound growth rate of 1.9%.
Men			
Unemployment Rate (18 to 19)	Remains between 16.7% and 17.8%.	Remains between 16.7% and 22.5%.	Remains between 13.4% and 16.7%
Unemployment Rate (20 to 24)	Remains between 9.2% and 10.1%.	Remains between 9.2% and 13.8%.	Remains between 7.0% and 9.3%.
Unemployment Rate (25&)	Remains between 4.4% and 5.2%.	Remains between 4.4% and 7.6%	Remains between 3.3% and 4.5%
Women			
Unemployment Rate (18 to 19)	Remains between 13.2% and 13.8%.	Remains between 13.7% and 16.7%.	Remains between 11.2% and 13.8%
Unemployment Rate (20 to 24)	Remains between 8.3% and 8.8%.	Remains between 8.8% and 10.7%.	Remains between 7.0% and 8.8%.
Unemployment Rate (25&)	Remains between 4.4% and 4.7%.	Remains between 4.6% and 6.1%	Remains between 3.5% and 4.6%

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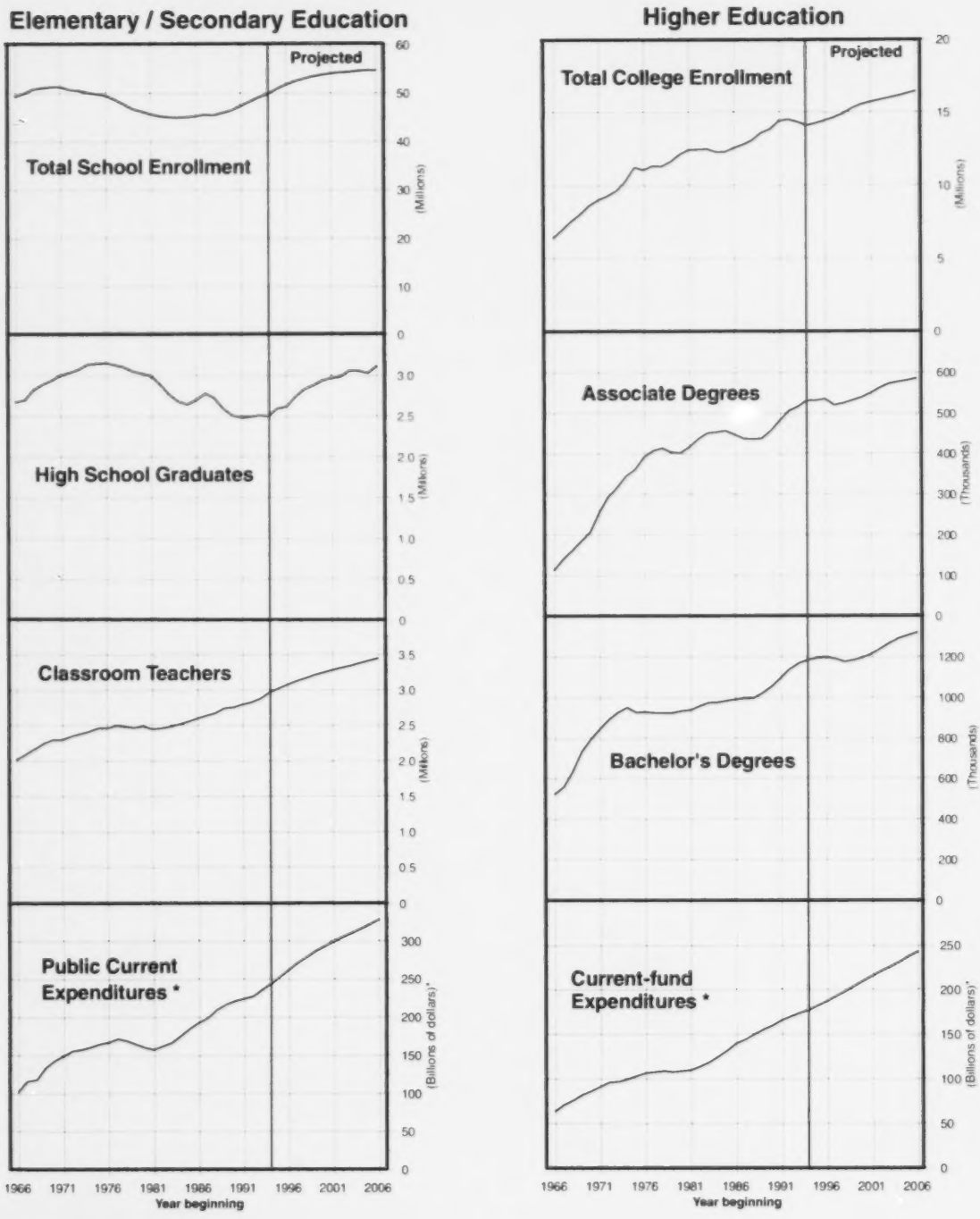
Figure 1
Past and projected trends in selected education statistics
1966-67 to 2006-2007



* Constant 1993-94 dollars

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Highlights

National

Enrollment

- **Total public and private elementary and secondary enrollment is projected to increase over the projection period**. Total public and private elementary and secondary enrollment is projected to increase from 49.8 million in 1994 to 51.7 million by 1996, surpassing the peak level of 51.3 million attained in 1971. Total enrollment is projected to increase further to 54.6 million by the year 2006, an increase of 10 percent from 1994 (table 1).

- **Over the projection period, enrollment in grades K–8 and grades 9–12 will increase**. Enrollment in grades K–8 is projected to increase from 36.2 million in 1994 to 38.1 million by the year 2006, an increase of 5 percent from 1994. Enrollment in grades 9–12 is projected to increase from 13.6 million in 1994 to 16.5 million by 2006, an increase of 21 percent from 1994 (table 1).

- **Enrollment in institutions of higher education is projected to increase over the projection period**. Higher education enrollment is projected to increase from an estimated 14.1 million in 1994 to 16.4 million by the year 2006, an increase of 16 percent. A 4-percent increase is projected under the low alternative and a 27-percent increase is projected under the high alternative (table 3).

High School Graduates

- **The number of high school graduates is projected to increase over the projection period**. High school graduates from public and private high schools are projected to increase from 2.5 million in 1993–94 to 3.0 million by 2005–2006, an increase of 21 percent (table 26).

Earned Degrees Conferred

- **Over the projection period, the number of bachelor's degrees is projected to increase**. Under the middle alternative, the number of bachelor's degrees is expected to increase from 1,182,000 in 1993–94 to 1,316,000 by 2005–2006, an increase of 11 percent. A 0.5-percent increase is projected under the low alternative and a 22-percent increase is projected under the high alternative (table 28).

- **The number of doctor's degrees is projected to increase and then decrease over the projection period**. Under the middle alternative, doctor's degrees are expected to increase from 41,900 in 1993–94 to 46,200 in 2000–2001. Then this number is projected to decrease to 43,200 by 2005–2006 (table 30).

Classroom Teachers

- **The number of classroom teachers is projected to rise over the projection period**. Under the middle alternative, the number of classroom teachers is expected to increase from 2.96 million in 1994 to 3.43 million by the year 2006, an increase of 16 percent. An 11-percent increase is projected under the low alternative and a 20-percent increase is projected under the high alternative (table 32).

- **Both elementary and secondary teachers are projected to increase over the projection period**. Under the middle alternative, the number of elementary teachers is projected to increase from 1.80 million in 1994 to 2.01 million by the year 2006, an increase of 12 percent. A 7-percent increase is projected under the low alternative and a 16-percent increase is projected under the high alternative. Under the middle alternative, secondary classroom teachers will increase from 1.17 million in 1994 to 1.42 million by the year 2006, an increase of 22 percent. A 17-percent increase is projected under the low alternative and a 26-percent increase is projected under the high alternative (table 32).

Expenditures

- **Current expenditures for public elementary and secondary schools are forecast to continue increasing through 2005–2006**. Current expenditures increased 43 percent in constant dollars, between 1980–81 and 1992–93. (1992–93 is the most recent year for which there are actual data.) With the increasing enrollments projected for this period, this trend of increasing current expenditures is expected to continue. Under the middle alternative, a 41-percent increase is projected for the period from 1992–93 to 2005–2006. Under the low alternative, current expenditures are projected to increase by 31 percent; under the high alternative, current expenditures are projected to increase by 52 percent (table 34).

- **Increases in current expenditures per pupil are also forecast to continue increasing for the period 1992–93 to 2005–2006**. Current expenditures per pupil in average daily attendance (ADA) in constant dollars increased 36 percent from 1980–81 to 1992–93. Most of that increase occurred from 1980–81 to 1989–90, when current expenditures per pupil in constant dollars increased 35 percent. From 1989–90 to 1992–93, current expenditures per pupil increased only 0.4 percent. Under the middle alternative, current expenditures per pupil are forecast to increase more rapidly again, with a 24-percent increase projected for the period from 1992–93 to 2005–2006. Under the low alternative, current expenditures per pupil are projected to increase 15 percent and under the high alternative, current expenditures per pupil are projected to increase 33 percent (table 34).

- **Increases in teacher salaries are forecast**. From 1980–81 to 1989–90, teacher salaries in constant dollars grew an estimated 21 percent. Reflecting a slowdown in the economy, teacher salaries are estimated to have fallen 1 percent in real terms from 1989–90 to 1994–95. As the current trend of increasing enrollments continues and as the economy begins to grow again, it is forecast that teacher salaries will also begin increasing. Teacher salaries are projected to increase 6 percent between 1994–95 and 2005–2006 under the middle alternative. A 3-percent increase is projected under the low alternative and a 10-percent increase is projected under the high alternative (table 36).

- **Current-fund expenditures are projected to increase in both public and private institutions**. Current-fund expenditures in institutions of higher education rose 57 percent in constant dollars from 1980–81 to 1992–93. (1992–93 is the most recent year for which there are available data.) During that time, current-fund expenditures rose 50 percent in public institutions and 69 percent in private institutions. A further 40-percent increase is projected for the period from 1992–93 to 2005–2006 under the middle alternative for all expenditures (table 37).

State-Level

Public Elementary and Secondary Enrollment

- **Public elementary and secondary school enrollment (kindergarten through grade 12) is expected to increase between 1994 and the year 2006, but these increases will vary by region**. Enrollment will increase most rapidly in the West, where total enrollment is expected to rise 21 percent. Enrollment in the South is projected to increase by 10 percent. The Northeast is expected to rise by 4 percent, while the Midwest is projected to increase by 3 percent (table 46).

- **Changes in public school enrollment are projected to vary by state between 1994 and the year 2006**. Public school enrollment is projected to increase 10 percent between 1994 and the year 2006. Sizable increases are expected in Alaska (19 percent), Delaware (28 percent), California (26 percent), and Washington (20 percent). Decreases are expected in District of Columbia (11 percent), Maine (6 percent), North Dakota (8 percent), and West Virginia (3 percent) (table 46).

- **Changes in public school elementary enrollment are projected to vary by state**. Public school elementary enrollment in kindergarten through grade 8 is expected to increase 5 percent between 1994 and the year 2006. Sizable increases in elementary enrollment are projected for Alabama (15 percent), California (20 percent), Delaware (28 percent), and Hawaii (18 percent). Decreases are projected for District of Columbia (22 percent), Maine (12 percent), New Hampshire (9 percent), and North Dakota (13 percent) (table 48).

- **Changes in public high school enrollment are projected across the Nation**. Public high school enrollment in grades 9 through 12 is projected to increase 22 percent between 1994 and 2006. Increases will occur in all states except West Virginia. Sizable increases are expected in California (44 percent), Nevada (41 percent), and Washington (35 percent) over the projection period. West Virginia is projected to decrease by 6 percent (table 50).

Public High School Graduates

- **Growth in the number of graduates from public schools will vary by region**. The number of public high school graduates is projected to increase 21 percent between 1993–94 and 2005–2006. Across region, the West is expected to rise by 33 percent. The Northeast is projected to grow by 21 percent. The South and Midwest are expected to increase by 18 percent and 13 percent, respectively, over the projection period (table 52).

- **Increases in the number of public high graduates are projected for most states**. Between 1993–94 and

2005–2006, sizable increases are expected in Arizona (61 percent), Hawaii (77 percent), Nevada (93 percent), and New Mexico (54 percent). Decreases are projected for District of Columbia (10 percent), Louisiana (2 percent), Mississippi (2 percent), and West Virginia (13 percent) (table 52).

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Introduction

Guide to This Edition

This edition of *Projections of Education Statistics to 2006* provides projections for key education statistics. This edition includes statistics on enrollment, graduates, classroom teachers, and expenditures in elementary and secondary schools and institutions of higher education. For the Nation, the tables, figures, and text contain data on enrollment, teachers, graduates, and expenditures for the past 14 years and projections to the year 2006. For the 50 States and the District of Columbia, the tables, figures, and text contain data on projections of public school elementary and secondary enrollment and public high school graduates to the year 2006. Similar methodologies were used to obtain a uniform set of projections for the 50 States and District of Columbia. These projections are further adjusted to agree with the national projections of public elementary and secondary school enrollment and public high school graduates appearing in this report. These projections reflect 1994 estimates and population projections based on the 1990 census. Appendix A describes the methodology and assumptions used to develop the projections. Appendix B contains tables of supplementary data. Data sources are presented in appendix C. Appendix D is a glossary of terms.

Limitations of Projections

Projections of time series usually differ from the reported data due to errors from many sources. This is because of the inherent nature of the statistical universe from which the basic data are obtained and the properties of projection methodologies, which depend on the validity of many assumptions. Therefore, alternative projections are shown for most statistical series to denote the uncertainty involved in making projections. These alternatives are not statistical confidence limits, but instead represent judgments made by the authors as to reasonable upper and lower bounds. Alternative projections are presented for higher education enrollment, classroom teachers, earned degrees conferred, and expenditures of public elementary and secondary schools and institutions of higher education.

Chapter 1

Elementary and Secondary Enrollment

Between 1994 and the year 2006, enrollment will increase in elementary and secondary schools. The primary reason for the increase is the rising number of annual births since 1977—sometimes referred to as the baby boom echo (figure 2). As a result, increases in the 3- to 5-year-old population are projected through 1996 and increases in the school-age populations are expected over the next 12 years (figures 3, 4, and 5). In 1995 and beyond, increases in the 5- to 13-year-old population, which began in the mid-1980s, are expected to continue the increase in elementary enrollment through the year 2002. The increase in the 14- to 17-year-old population, which started in 1991, will influence the growth in secondary enrollment over the projection period.

Elementary and Secondary Enrollment

Reflecting the decline in the 5- to 17-year-old population, total enrollment in public and private elementary and secondary schools decreased from 45.5 million in 1981 to 44.9 million in 1984, a decrease of 1 percent (table 1 and figure 6). After reaching a low of 44.9 million in 1984, total enrollment reversed its downward trend in response to an increase in the 5- to 17-year-old population and rose to 49.8 million in 1994, an increase of 11 percent from 1984. Total enrollment is projected to continue to increase to 51.7 million in 1996, surpassing the peak level of 51.3 million attained in 1971. Total enrollment is projected to increase further to 54.6 million by the year 2006, an increase of 10 percent from 1994.

Enrollment, by Control of School

Enrollment in public elementary and secondary schools decreased from 40.0 million in 1981 to 39.2 million in 1984, a decrease of 2 percent (figure 7). Since then, enrollment in public schools has increased to an estimated 44.2 million in 1994, an increase of 13 percent from 1984. Enrollment in public schools is projected to increase to 48.5 million by the year 2006, an increase of 10 percent from 1994.

Since the mid-1970s, enrollment in private elementary and secondary schools has fluctuated between 5.0 million and 5.7 million. In 1994, an estimated 5.6 million students were enrolled in private elementary and secondary schools. Enrollment in private schools is projected to increase to around 6.1 million by the year 2006, an increase of 9 percent from 1994.

Projections of enrollments in public elementary and secondary schools are based on projected grade retention rates. The retention rates for grades 2 through 10 are all close to 100 percent. Rates for grade 6 to grade 7 and grade 8 to grade 9 are significantly over 100 percent. Traditionally, these are the grades in which large numbers of private elementary students transfer to public secondary schools. The retention rates for grades 11 to 12 are about 90 percent. The grade retention rates are assumed to be constant throughout the projection period.

Projections of private school enrollment were derived using public school enrollment data. From 1970 to 1993, the ratio of private school enrollment to public school enrollment was calculated for grades K–8 and grades 9–12. These ratios were projected using single exponential smoothing, yielding a constant value over the projection period. This constant was applied to projections of public school enrollment for grades K–8 and 9–12 to yield projections of private school enrollment. This method assumes that the future pattern in the trend of private school enrollment will be the same as that in public school enrollment. However, a number of factors could alter the assumption of a constant ratio over the projection period.

Enrollment, by Grade Group

Between 1981 and 1984, enrollment in grades K–8 fell from 31.4 million to 31.2 million, a decrease of 0.6 percent. Then, this number increased to 36.2 million in 1994, an increase of 16 percent from 1984. Enrollment in grades K–8 is projected to increase to 38.8 million in 2002. Then, this number is expected to decline to 38.1 million by the year 2006, an increase of 5 percent from 1994. Enrollment in grades 9–12 decreased from 14.2 million in 1981 to 12.5 million in 1990, a decrease of 12 percent. It then increased to 13.6 million in 1994. By the year 2006, enrollment in grades 9–12 is projected to continue to rise to 16.5 million, an increase of 21 percent from 1994. Since enrollment rates for the school-age populations are nearly 100 percent for elementary grades and junior-high grades and close to 90 percent for high school grades, the historical and projected patterns of decline and growth in enrollment in grades K–8 and grades 9–12 reflect changes in the sizes of the 5- to 13-year-old population and the 14- to 17-year-old population.

Enrollment, by Grade Group and Control of School

Enrollment by grade group in public elementary and secondary schools shows trends similar to those of total enrollment. Enrollment in grades K–8 of public schools decreased from 27.3 million in 1981 to 26.9 million in 1984, a decrease of 1 percent. It then increased to 31.9 million in 1994. Enrollment in grades K–8 of public schools is projected to increase to 34.1 million in 2002. Then, it is expected to decrease to 33.5 million by the year 2006, an increase of 5 percent from 1994. Enrollment in grades 9–12 of public schools decreased from 12.8 million in 1981 to 11.3 million in 1990, a decrease of 11 percent. Then, it increased to 12.4 million in 1994. Thereafter, 9–12 enrollment is expected to increase to 15.0 million by the year 2006, an increase of 21 percent from 1994.

Enrollment by grade group in private elementary and secondary schools will show patterns similar to trends in enrollment in public schools over the projection period by virtue of the private school enrollment projection methodology. The methodology assumes that private school enrollment will reflect trends in public school enrollment. Enrollment in grades K–8 of private schools is projected to increase from an estimated 4.4 million in 1994 to 4.6 million by the year 2006, an increase of 5 percent. Enrollment in grades 9–12 of private schools is projected to increase from an estimated 1.2 million in 1994 to 1.5 million by the year 2006, an increase of 21 percent.

Enrollment, by Organizational Level

Enrollments may also be aggregated by the level of school attended by students. The reported enrollment in elementary schools is smaller than enrollment in kindergarten through grade 8 because it excludes enrollment in grades 7 and 8 in secondary schools. Enrollment in elementary schools decreased from 28.1 million in 1981 to 28.0 million in 1983 (table 2). This number increased by 18 percent to 33.1 million in 1994. Enrollment in elementary schools is expected to continue to increase to 35.3 million in the year 2001, before declining to 34.6 million by the year 2006, an increase of 5 percent from 1994. Enrollment in secondary schools, including 7th and 8th graders in secondary schools, decreased from 17.4 million in 1981 to 15.3 million in 1990, a decrease of 12 percent. Then, this number increased by 9 percent to 16.7 million in 1994. Enrollment in secondary schools is projected to rise to 20.0 million by the year 2006, an increase of 20 percent from 1994.

Figure 2
Annual number of births, with projections: 1946 to 2006

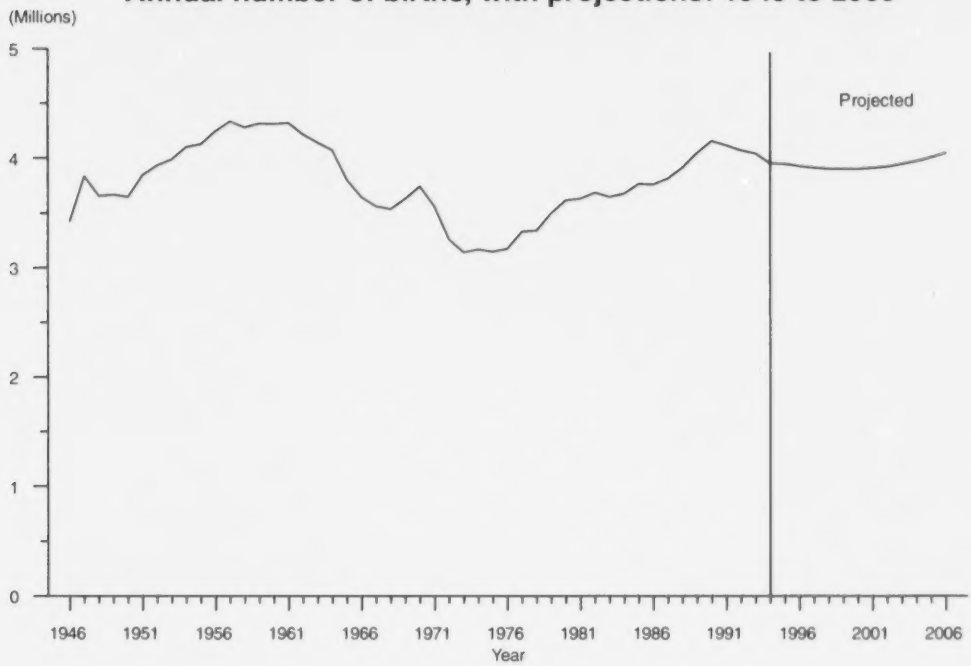

Figure 3
3- to 5-year-old population, with projections: 1981 to 2006

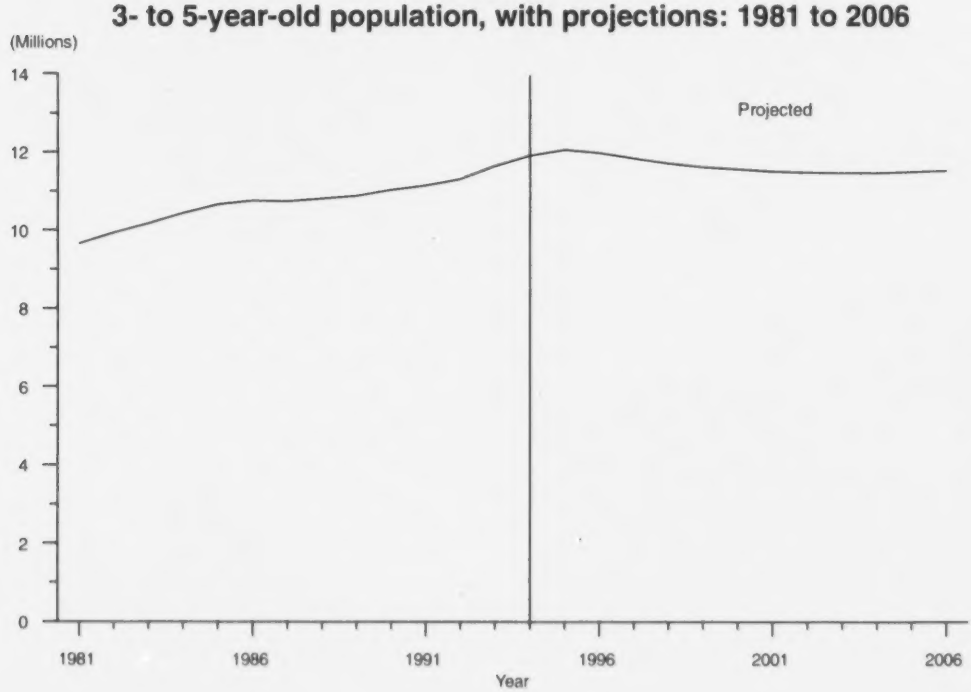

Figure 4
5- to 17-year-old population, with projections: 1981 to 2006

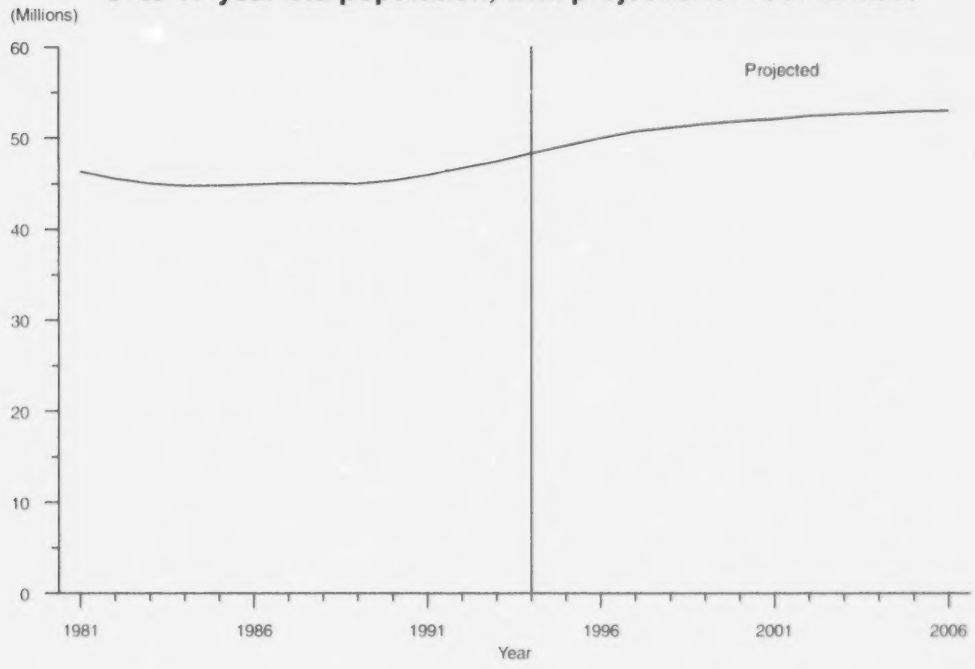

Figure 5
School-age populations, with projections: 1981 to 2006

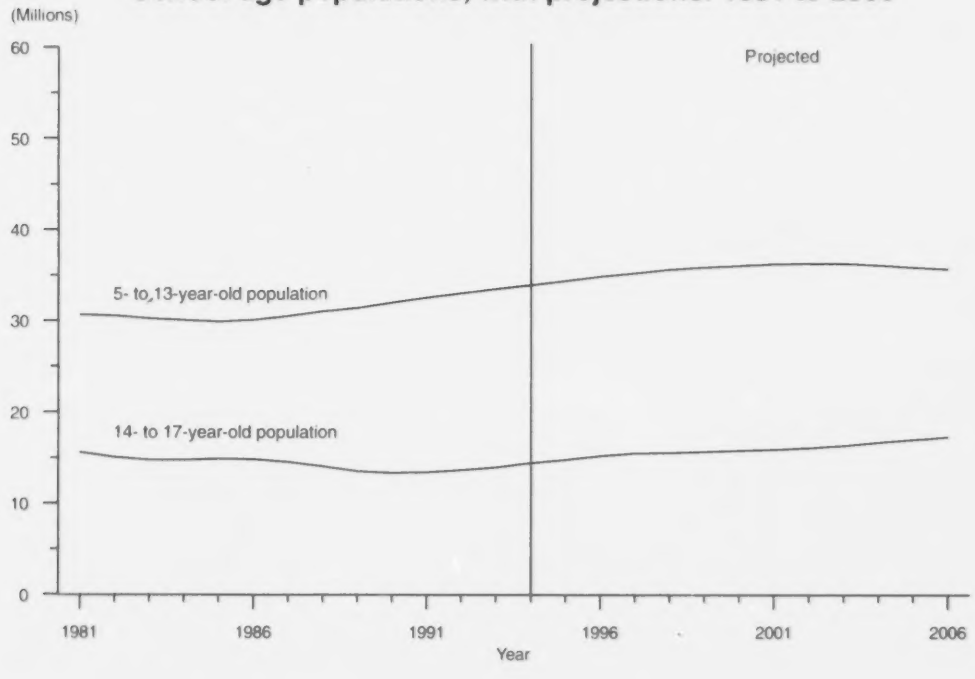

Figure 6
Enrollment in elementary and secondary schools, by grade level, with projections: Fall 1981 to fall 2006

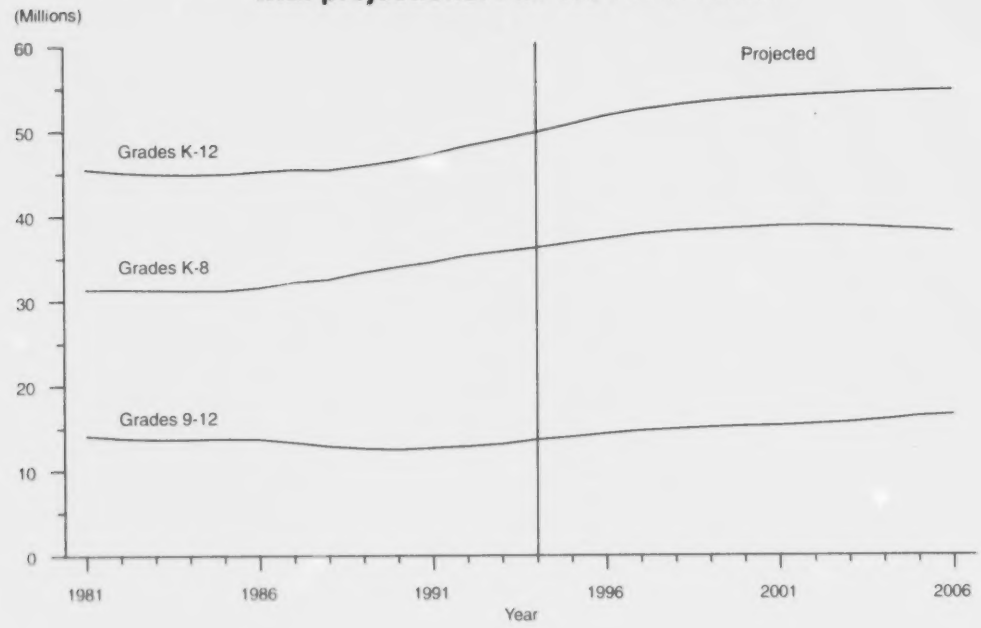

Figure 7
Enrollment in elementary and secondary schools, by control of institution, with projections: Fall 1981 to fall 2006

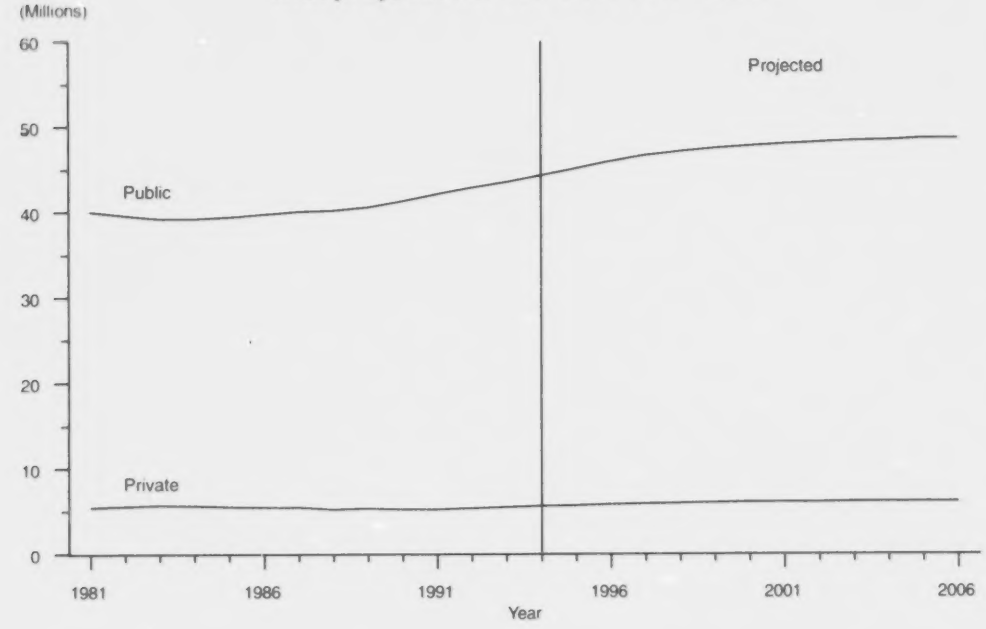

Table 1.—Enrollment in grades K–8[1] and 9–12 of elementary and secondary schools, by control of institution, with projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total			Public			Private		
	K–12[1]	K–8[1]	9–12	K–12[1]	K–8[1]	9–12	K–12[1]	K–8[1]	9–12
1981	45,544	31,380	14,164	40,044	27,280	12,764	[2]5,500	4,100	1,400
1982	45,166	31,361	13,805	39,566	27,161	12,405	[2]5,600	4,200	1,400
1983	44,967	31,296	13,671	39,252	26,981	12,271	5,715	4,315	1,400
1984	44,908	31,205	13,704	39,208	26,905	12,304	[2]5,700	4,300	1,400
1985	44,979	31,229	13,750	39,422	27,034	12,388	5,557	4,195	1,362
1986	45,205	31,536	13,669	39,753	27,420	12,333	[2]5,452	4,116	1,336
1987	45,488	32,165	13,323	40,008	27,933	12,076	[3]5,479	4,232	1,247
1988	45,430	32,537	12,893	40,189	28,501	11,687	[3]5,241	4,036	1,206
1989	45,898	33,314	12,583	40,543	29,152	11,390	[3]5,355	4,162	1,193
1990	46,448	33,973	12,475	41,217	29,878	11,338	[3]5,232	4,095	1,137
1991	47,246	34,580	12,666	42,047	30,506	11,541	[3]5,199	4,074	1,125
1992	48,191	35,293	12,898	42,816	31,081	11,735	[3]5,375	4,212	1,163
1993	48,947	35,796	13,152	43,476	31,516	11,961	[3]5,471	4,280	1,191
1994[4]	49,826	36,225	13,602	44,230	31,864	12,366	5,596	4,360	1,236
					Projected				
1995	50,776	36,814	13,962	45,076	32,383	12,693	5,700	4,431	1,269
1996	51,683	37,330	14,353	45,885	32,837	13,049	5,798	4,493	1,304
1997	52,400	37,772	14,628	46,524	33,226	13,299	5,876	4,547	1,329
1998	52,921	38,109	14,811	46,988	33,522	13,466	5,933	4,587	1,346
1999	53,342	38,303	15,039	47,365	33,692	13,673	5,977	4,610	1,367
2000	53,668	38,484	15,184	47,656	33,852	13,804	6,012	4,632	1,380
2001	53,933	38,686	15,248	47,891	34,029	13,862	6,042	4,656	1,386
2002	54,168	38,764	15,404	48,102	34,098	14,004	6,066	4,666	1,400
2003	54,312	38,726	15,586	48,234	34,065	14,169	6,078	4,661	1,416
2004	54,449	38,519	15,930	48,365	33,882	14,483	6,084	4,636	1,448
2005	54,587	38,289	16,299	48,497	33,680	14,818	6,090	4,609	1,481
2006	54,615	38,092	16,523	48,528	33,507	15,021	6,086	4,585	1,501

[1] Includes most kindergarten and some nursery school enrollment.

[2] Estimated on the basis of past data.

[3] Estimate.

[4] Projected.

NOTE: Some data have been revised from previously published figures. Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Schools*; Common Core of Data surveys; "Private Elementary and Secondary Education, 1983: Enrollment, Teachers, and Schools," *NCES Bulletin*, December 1984; 1985 Private School Survey; "Key Statistics for Private Elementary and Secondary Education: School Year 1988–89," *Early Estimates*; "Key Statistics for Private Elementary and Secondary Education: School Year 1990–91," *Early Estimates*; Public and Private Elementary and Secondary Education Statistics: School Year 1991–92," *Early Estimates*; and "Public and Private Elementary and Secondary Education Statistics: School Year 1992–93," *Early Estimates*. (This table was prepared September 1995.)

Table 2.—Enrollment in elementary and secondary schools, by organizational level and control of institution, with projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total			Public			Private		
	K-12[1]	Elementary	Secondary	K-12[1]	Elementary	Secondary	K-12[1]	Elementary	Secondary
1981	45,544	28,137	17,407	40,044	24,037	16,007	[2]5,500	4,100	1,400
1982	45,166	28,016	17,149	39,566	23,816	15,749	[2]5,600	4,200	1,400
1983	44,967	27,950	17,017	39,252	23,635	15,617	5,715	4,315	1,400
1984	44,908	28,042	16,866	39,208	23,742	15,466	[2]5,700	4,300	1,400
1985	44,979	28,330	16,649	39,422	24,135	15,287	5,557	4,195	1,362
1986	45,205	28,613	16,592	39,753	24,497	15,256	[2]5,452	4,116	1,336
1987	45,488	29,447	16,040	40,008	25,215	14,793	[3]5,479	4,232	1,247
1988	45,430	29,776	15,654	40,189	25,740	14,448	[3]5,241	4,036	1,206
1989	45,898	30,570	15,328	40,543	26,408	14,135	[3]5,355	4,162	1,193
1990	46,448	31,145	15,304	41,217	27,050	14,167	[3]5,232	4,095	1,137
1991	47,246	31,669	15,577	42,047	27,595	14,452	[3]5,199	4,074	1,125
1992	48,191	32,312	15,879	42,816	28,100	14,716	[3]5,375	4,212	1,163
1993	48,947	32,813	16,134	43,476	28,533	14,943	[3]5,471	4,280	1,191
1994[4]	49,826	33,116	16,710	44,230	28,756	15,474	5,596	4,360	1,236
					Projected				
1995	50,776	33,659	17,117	45,076	29,228	15,848	5,700	4,431	1,269
1996	51,683	34,150	17,533	45,885	29,657	16,229	5,798	4,493	1,304
1997	52,400	34,542	17,859	46,524	29,995	16,529	5,876	4,547	1,329
1998	52,921	34,842	18,079	46,988	30,255	16,733	5,933	4,587	1,346
1999	53,342	35,053	18,289	47,365	30,442	16,923	5,977	4,610	1,367
2000	53,668	35,206	18,463	47,656	30,573	17,083	6,012	4,632	1,380
2001	53,933	35,321	18,612	47,891	30,665	17,227	6,042	4,656	1,386
2002	54,168	35,292	18,877	48,102	30,626	17,477	6,066	4,666	1,400
2003	54,312	35,179	19,133	48,234	30,518	17,717	6,078	4,661	1,416
2004	54,449	34,974	19,475	48,365	30,338	18,027	6,084	4,636	1,448
2005	54,587	34,786	19,801	48,497	30,178	18,320	6,090	4,609	1,481
2006	54,615	34,641	19,974	48,528	30,055	18,473	6,086	4,585	1,501

[1] Includes most kindergarten and some nursery school enrollment.
[2] Estimated on the basis of past data.
[3] Estimate.
[4] Projected.

NOTE: Some data have been revised from previously published figures. Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Schools*; Common Core of Data surveys; "Private Elementary and Secondary Education, 1983: Enrollment, Teachers, and Schools," *NCES Bulletin*, December 1984; 1985 Private School Survey; "Key Statistics for Private Elementary and Secondary Education: School Year 1988–89," *Early Estimates*; "Key Statistics for Private Elementary and Secondary Education: School Year 1990–91," *Early Estimates*; Public and Private Elementary and Secondary Education Statistics: School Year 1991–92," *Early Estimates*; and "Public and Private Elementary and Secondary Education Statistics: School Year 1992–93," *Early Estimates*. (This table was prepared September 1995.)

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Chapter 2

Higher Education Enrollment

Enrollment in institutions of higher education* is expected to rise between 1994 and the year 2006. The growth is due in part to the rising enrollment rates of most age cohorts. Changes in college-age populations will also affect enrollment levels over the next 12 years (figures 8 and 9). Over the projection period, the 25- to 29-year-old population is projected to decrease by 3 percent, and the 30- to 34-year-old population will decline by 20 percent. However, after a decrease of 3 percent from 1994 to 1996, the 18- to 24-year-old population will begin to increase in 1997 and increase by 16 percent by the end of the projection period. The 35- to 44-year-old population will increase by 7 percent between 1994 and 1999, and then decrease by 7 percent between 1999 and 2006. The increases in the youngest and oldest populations are expected to offset the loss of students from the 25- to 29-year-old and 30- to 34-year-old populations, thereby contributing to the increases in college enrollment levels in 1995 and beyond.

Higher education enrollment projections were based on projected enrollment rates, by age and sex, which were then applied to population projections by age and sex developed by the Bureau of the Census. The middle series population projections, which assume middle fertility and net immigration, were used. The age-specific enrollment rates were projected using econometric models by taking into account the effects of demographic changes and economic conditions on the enrollment rates of men and women.

Three alternative projections of enrollment in institutions of higher education were developed to indicate the range of possible outcomes. The middle alternative assumes that the enrollment rates of men and women by age and attendance status will primarily increase over the projection period. The full-time and part-time enrollment rates of men were projected as a function of dummy variables by age group, log of four-period weighted average of real disposable income per capita, and log unemployment rate by age group. The enrollment rates of women were projected as a function of disposable income per capita, population by age, and unemployment rate by age group. The low alternative assumes that the enrollment rates by age and attendance status will remain at their most recent levels. Under the high alternative, the enrollment rates by age and attendance status were projected to equal the middle alternative or increase at a faster rate for most age groups.

Total Higher Education Enrollment

In 1981, there were 12.4 million students enrolled in institutions of higher education. In the late 1970s and early 1980s, older students, primarily women and part-time students, began to enroll in greater numbers. As a result, college enrollment increased to 12.5 million in 1983. In 1984 and 1985, enrollment declined to 12.2 million. Then, it increased to 14.5 million in 1992. By 1994, it had decreased to an estimated 14.1 million (table 3 and figure 10). Under the middle alternative, college enrollment is projected to rise to 16.4 million by the year 2006, an increase of 16 percent from 1994. This will represent an average annual growth rate of 1.3 percent over the projection period. Between 1994 and 2000, college enrollment is projected to increase at an average annual growth rate of 1.6 percent. Between 2000 and 2006, it will grow at an average annual growth rate of 0.9 percent (figure 11). Although the 18- to 24-year-old population is projected to decline until 1996, a decrease of 3 percent from 1994, this population will increase 16 percent by the year 2006. This increase in the younger population, along with enrollment rates remaining above 1994 levels, is expected to offset somewhat the decline in the number of 25- to 34-year-olds enrolled in college.

Under the low alternative, college enrollment is projected to increase from an estimated 14.1 million in 1994 to 14.6 million by the year 2006. This will represent an average annual growth rate of 0.3 percent, for an increase of 4 percent over the projection period. This alternative assumes that the enrollment rates will remain at their most recent levels.

Under the high alternative, college enrollment is expected to increase from an estimated 14.1 million in 1994 to 17.8 million by the year 2006. This will represent an average annual growth rate of 2.0 percent, for an increase of 27 percent over the projection period. This level is expected to be maintained during 1995 and beyond if the enrollment rates remain well above their 1994 levels.

For key enrollment statistics, the following tabulations show: (1) the average annual rate of growth (in percent) for 1981–94 and alternative projected rates of change for 1994–2006 and (2) rates of change for 1981–88 and 1988–94 and the middle alternative projected rates of change for 1994–2000 and 2000–2006.

*This term applies mainly to those institutions that provide study beyond secondary school and that offer programs terminating in an associate, baccalaureate, or higher degree.

Average annual rate of change (in percent)

	1981–94	1994–2006		
		Low	Middle	High
Total	1.0	0.3	1.3	2.0
Men	0.4	0.3	1.3	2.0
Women	1.5	0.4	1.3	2.0
Full-time	0.8	0.7	1.9	2.7
Part-time	1.3	-0.1	0.4	1.0
Public	1.0	0.3	1.2	1.9
Private	0.9	0.3	1.4	2.1
4-year	1.0	0.4	1.4	2.1
2-year	1.1	0.2	1.1	1.8
Undergraduate	0.9	0.4	1.4	2.0
Graduate	1.9	-0.4	0.6	1.5
First-professional	0.7	-0.5	1.2	2.6
Full-time-equivalent	0.9	0.5	1.6	2.3

Average annual rate of change (in percent)

(Middle alternative projections)

	1981–88	1988–94	Projected	
			1994–2000	2000–2006
Total	0.8	1.3	1.6	0.9
Men	0.1	0.9	1.7	0.9
Women	1.4	1.6	1.6	1.0
Full-time	0.5	1.2	2.4	1.4
Part-time	1.1	1.4	0.6	0.3
Public	0.7	1.3	1.6	0.9
Private	0.9	1.0	1.7	1.0
4-year	1.0	1.0	1.7	1.1
2-year	0.5	1.8	1.4	0.7
Undergraduate	0.7	1.1	1.7	1.0
Graduate	1.3	2.7	1.0	0.2
First-professional	-0.4	2.0	1.8	0.7
Full-time-equivalent	0.7	1.2	2.0	1.2

Enrollment, by Sex of Student

Women played a major role in the increase of enrollment between 1981 and 1994. The enrollment of women in college increased from 6.4 million in 1981 to an estimated 7.8 million in 1994, representing an average annual growth rate of 1.5 percent, for a 21-percent increase over the period (figure 12). Under the middle alternative, enrollment of women is expected to increase to 9.0 million by the year 2006, an increase of 16 percent from 1994. This will represent a growth rate of 1.3 percent per year, less than the growth rate of 1.5 percent for the 1981–94 period. The rate of growth will be higher during the first half of the projection period (1994–2000) than during the second half (2000–2006), 1.6 percent per year versus 1.0 percent per year (figure 13). As a share of total college enrollment, women were 55 percent of all college students in 1994 compared with 52 percent in 1981. Women are expected to maintain their share of 55 percent of college enrollment in the year 2006. Under the low alternative, enrollment of women is expected to increase from 7.8 million in 1994 to 8.1 million by the year 2006, representing a growth rate of 0.4 percent per year. Under the high alternative, enrollment of women is expected to increase from 7.8 million in 1994 to 9.8 million by the year 2006, representing a growth rate of 2.0 percent per year.

Despite fluctuations in enrollment to 1985, the enrollment of men in college has since increased from 5.9 million in 1986 to an estimated 6.3 million in 1994. Over the 1981–94 period, the growth rate of 0.4 percent per year for men was slightly less than one-fourth of the rate for women. Under the middle alternative, enrollment of men is expected to increase to 7.4 million by the year 2006, a 17-percent increase from 1994, for an average annual growth rate of 1.3 percent. The growth rate of enrollment of men will be higher in the first half of the projection period than in the second half, 1.7 percent per year versus 0.9 percent per year. Under the low alternative, enrollment of men is expected to increase from 6.3 million in 1994 to 6.5 million by the year 2006, representing a growth rate of 0.3 percent per year. Under the high alternative, enrollment of men is expected to increase from 6.3 million in 1994 to 8.0 million by the year 2006, representing a growth rate of 2.0 percent per year.

Enrollment, by Attendance Status

Full-time enrollment increased from 7.2 million in 1981 to an estimated 8.0 million in 1994 (figure 14). This is an average annual growth rate of 0.8 percent, for an increase of 11 percent over the period. Under the middle alternative, full-time enrollment is expected to increase another 25 percent to 9.9 million by the year 2006, representing an average annual growth rate of 1.9 percent. Over the projection period, the growth rate for the 1994–2000 period will be higher than the growth rate for the 2000–2006 period, 2.4 percent per year versus 1.4 percent per year (figure 15). Under the low alternative, full-time enrollment is expected to increase from 8.0 million in 1994 to 8.6 million by the year 2006, representing a growth rate of 0.7 percent per year. Under the high alternative, full-time enrollment is expected to increase from 8.0 million in 1994 to 10.9 million by the year 2006, representing a growth rate of 2.7 percent per year.

Part-time enrollment increased from 5.2 million in 1981 to an estimated 6.1 million in 1994. This is an average annual growth rate of 1.3 percent, for an increase of 18 percent over the period. Under the middle alternative, part-time enrollment is expected to increase at an average annual growth rate of 0.4 percent and reach 6.4 million by the year 2006, for an increase of 5 percent over the projection period. The growth rate for part-time enrollment during the 1994–2000 period will be more than the growth rate for the 2000–2006 period, 0.6 percent versus 0.3 percent. Under the low alternative, part-time enrollment is expected to decrease from 6.1 million in 1994 to 6.0 million by the year 2006, representing a rate of decline of 0.1 percent per year. Under the high alternative, part-time enrollment is expected to increase from 6.1 million in 1994 to 6.9

million by the year 2006, representing a growth rate of 1.0 percent per year.

Enrollment, by Control of Institution

Enrollment in public institutions grew from 9.6 million in 1981 to an estimated 11.0 million in 1994, increasing at an average annual rate of 1.0 percent, for an increase of 14 percent over the period (figure 16). Under the middle alternative, public enrollment is expected to increase to 12.8 million by 2006, rising by an average annual growth rate of 1.2 percent, for an increase of 16 percent over the projection period. During the projection period, enrollment in public institutions is projected to increase at an average annual growth rate of 1.6 percent during the 1994–2000 period and 0.9 percent during the 2000–2006 period (figure 17). Enrollment in public 4-year institutions is projected to increase from an estimated 5.8 million in 1994 to 6.9 million by the year 2006. Enrollment in public 2-year institutions is expected to increase from an estimated 5.2 million in 1994 to 5.9 million by the year 2006.

Under the low alternative, public enrollment is expected to increase from 11.0 million in 1994 to 11.4 million by the year 2006, representing a growth rate of 0.3 percent per year. Under the high alternative, public enrollment is expected to increase from 11.0 million in 1994 to 13.9 million by the year 2006, representing a growth rate of 1.9 percent per year.

Enrollment in private institutions increased from 2.7 million in 1981 to an estimated 3.1 million in 1994, increasing at an average annual growth rate of 0.9 percent, for an increase of 13 percent over the period. Under the middle alternative, private enrollment is expected to increase to 3.6 million by 2006, rising by an average annual growth rate of 1.4 percent, for an increase of 18 percent over the projection period. During the projection period, enrollment in private institutions is projected to increase at an annual growth rate of 1.7 percent during the 1994–2000 period and 1.0 percent during the 2000–2006 period. Enrollment in private 4-year institutions is expected to increase from an estimated 2.8 million in 1994 to 3.3 million by the year 2006. Enrollment in private 2-year institutions is projected to increase from an estimated 238,000 in 1994 to 285,000 by the year 2006.

Under the low alternative, private enrollment is expected to increase from 3.1 million in 1994 to 3.2 million by the year 2006, representing a growth rate of 0.3 percent per year. Under the high alternative, private enrollment is expected to increase from 3.1 million in 1994 to 4.0 million by the year 2006, representing a growth rate of 2.1 percent per year.

Enrollment, by Type of Institution

Enrollment in 4-year institutions increased from 7.7 million in 1981 to an estimated 8.7 million in 1994, increasing at an average annual growth rate of 1.0 percent, for a 13-percent increase over the period (table 4 and figure 18). Under the middle alternative, enrollment in 4-year institutions is expected to rise to 10.2 million by the year 2006, increasing at an average annual growth rate of 1.4 percent, for an 18-percent increase over the projection period. During the projection period, enrollment in 4-year institutions is projected to increase at an annual growth rate of 1.7 percent during the 1994–2000 period and 1.1 percent during the 2000–2006 period (figure 19).

Under the low alternative, enrollment in 4-year institutions is expected to increase from 8.7 million in 1994 to 9.1 million by the year 2006, representing a growth rate of 0.4 percent per year. Under the high alternative, enrollment in 4-year institutions is expected to increase from 8.7 million in 1994 to 11.1 million by the year 2006, representing a growth rate of 2.1 percent per year.

Enrollment in 2-year institutions rose from 4.7 million in 1981 to an estimated 5.4 million in 1994, increasing at an average annual growth rate of 1.1 percent per year, for a 15-percent increase over the period (table 5). Under the middle alternative, enrollment in 2-year institutions is expected to rise to 6.2 million by the year 2006, increasing at an average annual growth rate of 1.1 percent, for a 14-percent increase over the projection period. During the projection period, enrollment in 2-year institutions is projected to increase at an annual growth rate of 1.4 percent during the 1994–2000 period and 0.7 percent during the 2000–2006 period.

Under the low alternative, enrollment in 2-year institutions is expected to increase from 5.4 million in 1994 to 5.6 million by the year 2006, representing a growth rate of 0.2 percent per year. Under the high alternative, enrollment in 2-year institutions is expected to increase from 5.4 million in 1994 to 6.7 million by the year 2006, representing a growth rate of 1.8 percent per year.

Enrollment, by Level

Undergraduate enrollment increased from 10.8 million in 1981 to an estimated 12.1 million in 1994, increasing at an average annual growth rate of 0.9 percent, for a 12-percent increase over the period (table 14 and figure 20). Under the middle alternative, undergraduate enrollment is expected to increase to 14.2 million by the year 2006, at a growth rate of 1.4 percent per year, for an 18-percent increase over the projection period. During the projection period, undergraduate enrollment is projected to increase at an annual growth rate of 1.7 percent during the 1994–2000 period and 1.0 percent during the 2000–2006 period (figure 21).

Under the low alternative, undergraduate enrollment is expected to increase from 12.1 million in 1994 to 12.7 million by the year 2006, representing a growth rate of 0.4 percent per year. Under the high alternative, undergraduate enrollment is expected to increase from 12.1 million in 1994 to 15.4 million by the year 2006, representing a growth rate of 2.0 percent per year.

Graduate enrollment rose from 1.3 million in 1981 to an estimated 1.7 million in 1994, at an average annual growth rate of 1.9 percent, for a 28-percent increase over the period (table 17 and figure 22). Under the middle alternative, graduate enrollment is expected to increase to 1.9 million by the year 2006, increasing at an average annual growth rate of 0.6 percent, for a 7-percent increase over the projection period. During the projection period, graduate enrollment is projected to increase at an annual growth rate of 1.0 percent during the 1994–2000 period and decrease at a rate of 0.2 percent during the 2000–2006 period (figure 23).

Under the low alternative, graduate enrollment is expected to decrease from 1.7 million in 1994 to 1.6 million by the year 2006, representing a rate of decline of 0.4 percent per year. Under the high alternative, graduate enrollment is expected to increase from 1.7 million in 1994 to 2.1 million by the year 2006, representing a growth rate of 1.5 percent per year.

First-professional enrollment increased from 275,000 in 1981 to an estimated 301,000 in 1994, an average annual growth rate of 0.7 percent, for a 9-percent increase over the period (table 20 and figure 22). Under the middle alternative, first-professional enrollment is expected to increase to 349,000 by 2006. This represents an average annual increase of 1.2 percent over the projection period, a 16-percent increase from 1994. During the projection period, first-professional enrollment is projected to increase at an average annual rate of 1.8 percent during the 1994–2000 period and a growth rate of 0.7 percent during the 2000–2006 period (figure 23).

Under the low alternative, first-professional enrollment is expected to decrease from 301,000 in 1994 to 282,000 by the year 2006, representing a rate of decline of 0.5 percent per year. Under the high alternative, first-professional enrollment is expected to increase from 301,000 in 1994 to 408,000 by the year 2006, representing a growth rate of 2.6 percent per year.

Full-Time-Equivalent Enrollment

Full-time-equivalent enrollment increased from 9.0 million in 1981 to an estimated 10.2 million in 1994, increasing at an average annual rate of growth of 0.9 percent, for a 13-percent increase over the period (table 23 and figure 24). Under the middle alternative, full-time-equivalent enrollment is expected to increase to 12.3 million by the year 2006, increasing at an average annual growth rate of 1.6 percent, for a 21-percent increase over the projection period. During the projection period, full-time-equivalent enrollment is projected to increase at an annual growth rate of 2.0 percent during the 1994–2000 period and 1.2 percent during the 2000–2006 period (figure 25).

The full-time-equivalent of undergraduate enrollment in 4-year institutions, which was an estimated 5.7 million in 1994, will be 7.0 million by the year 2006. The full-time-equivalent of undergraduate enrollment in 2-year institutions, which was an estimated 3.2 million in 1994, will be 3.7 million by the year 2006.

In public institutions, full-time-equivalent enrollment, which was an estimated 7.7 million in 1994, will be 9.2 million by the year 2006. In private institutions, full-time-equivalent enrollment, which was an estimated 2.5 million in 1994, will be 3.0 million by the year 2006.

Under the low alternative, full-time-equivalent enrollment is expected to increase from 10.2 million in 1994 to 10.8 million by the year 2006, representing a growth rate of 0.5 percent per year. Under the high alternative, full-time-equivalent enrollment is expected to increase from 10.2 million in 1994 to 13.4 million by the year 2006, representing a growth rate of 2.3 percent per year.

Enrollment, by Age

The alternative projections of higher education enrollment by age, sex, and attendance status are shown in table 6 (middle alternative), table 7 (low alternative), and table 8 (high alternative). These projections are based on age-specific enrollment data from the Bureau of the Census and enrollment data from NCES.

Under the middle alternative, the period from 1986 to 2006 will be one of change in the age distribution of college students. The enrollment of students who are 18- to 24-years old increased from 7.0 million in 1986 to an estimated 7.6 million in 1994, an increase of 9 percent (figure 26). This number is expected to increase to 9.7 million by the year 2006, an increase of 27 percent from 1994. As a result, the proportion of students who are 18- to 24-years old, which fell from 56.2 percent in 1986 to 54.3 percent in 1994, is projected to be 59.1 percent by the year 2006.

On the other hand, the enrollment of students who are 25 years old and over increased from 5.3 million in 1986 to an estimated 6.3 million in 1994, an increase of 19 percent. This number is projected to increase to 6.5 million by the year 2006, an increase of 4 percent. Over the projection period, the proportion of students 25 years old and over rose from 42.2 percent in 1986 to 44.6 percent in 1994. This proportion is projected to be 39.7 percent by the year 2006.

Figure 8
College-age populations (18-24 years and 25-29 years), with projections: 1981 to 2006

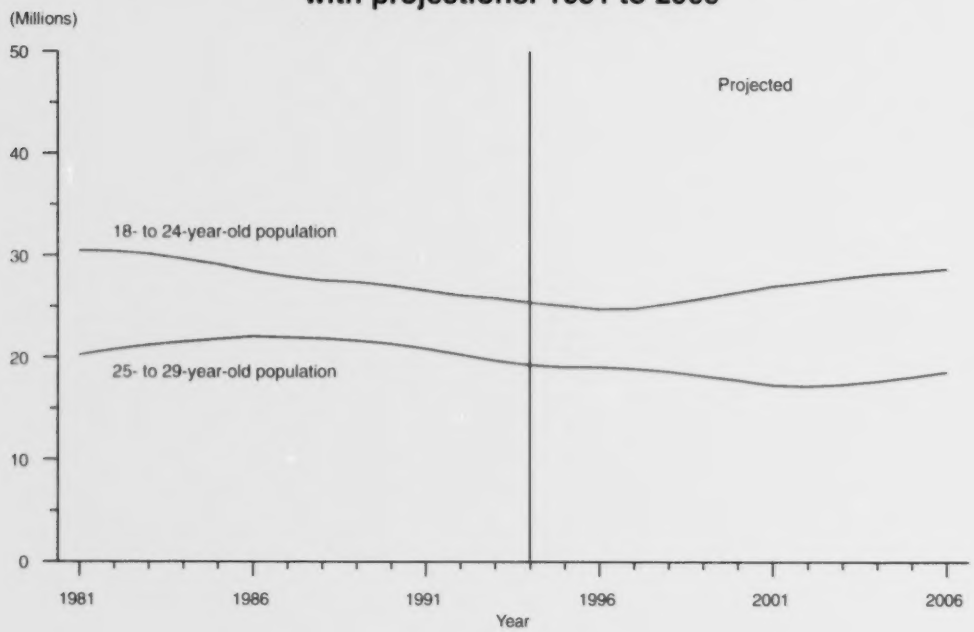

Figure 9
College-age populations (30-34 years and 35-44 years), with projections: 1981 to 2006

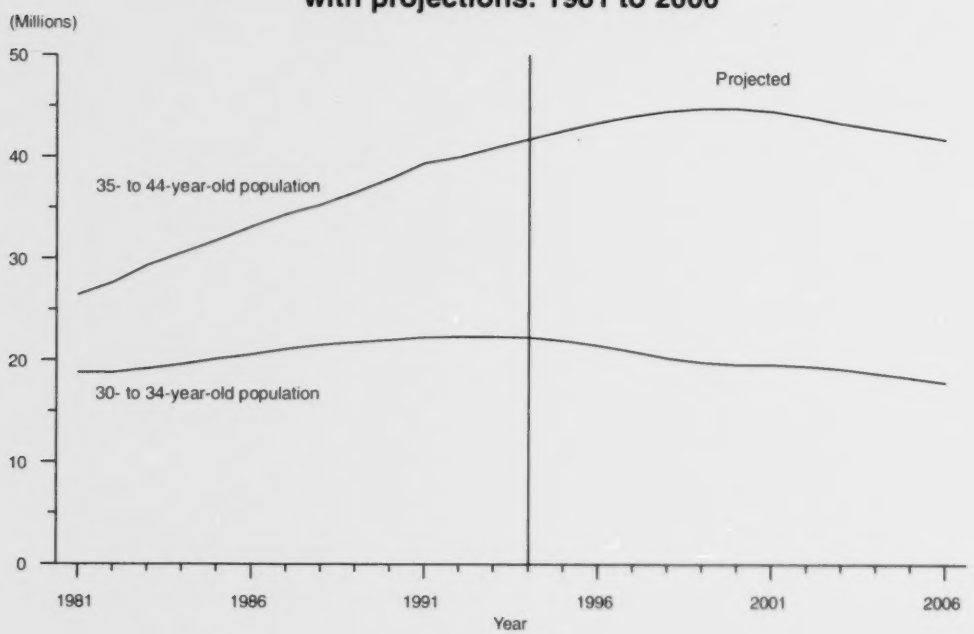

Figure 10
Enrollment in institutions of higher education, with alternative projections: Fall 1981 to fall 2006

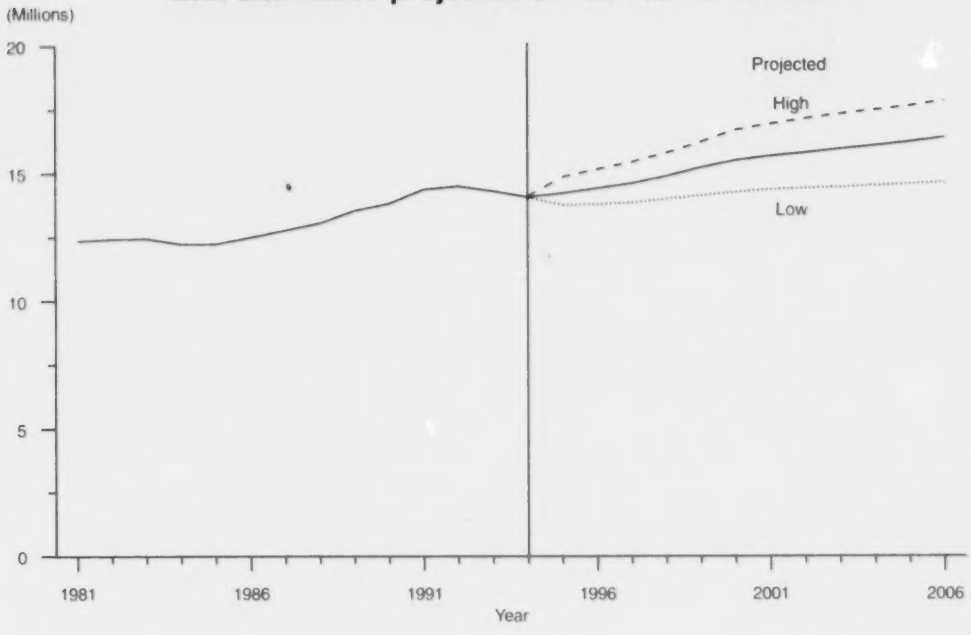

Figure 11
Average annual growth rates for total higher education enrollment

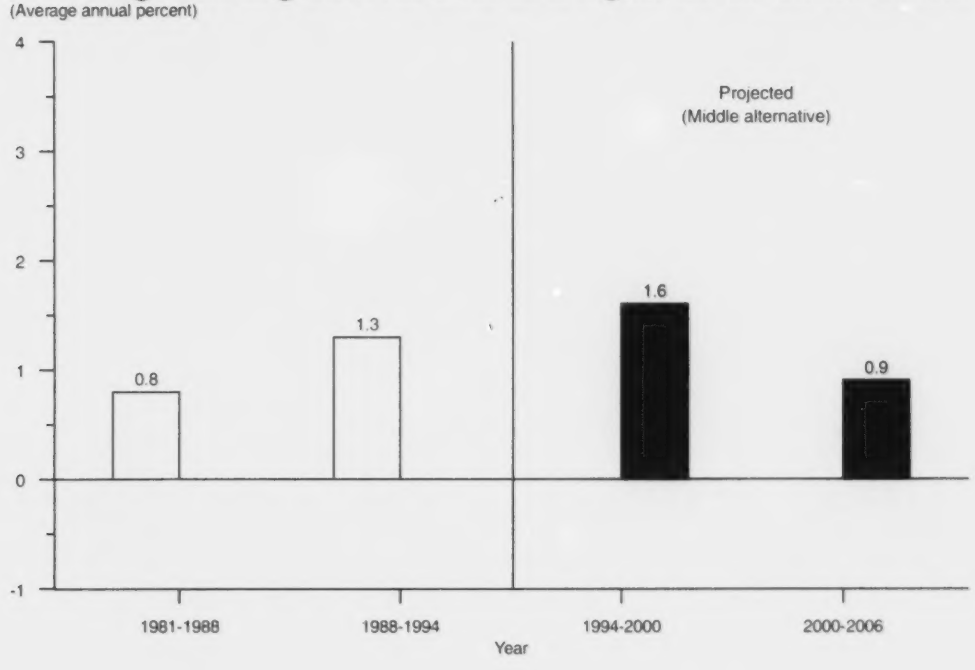

Figure 12
Enrollment in institutions of higher education, by sex, with middle alternative projections: Fall 1981 to fall 2006

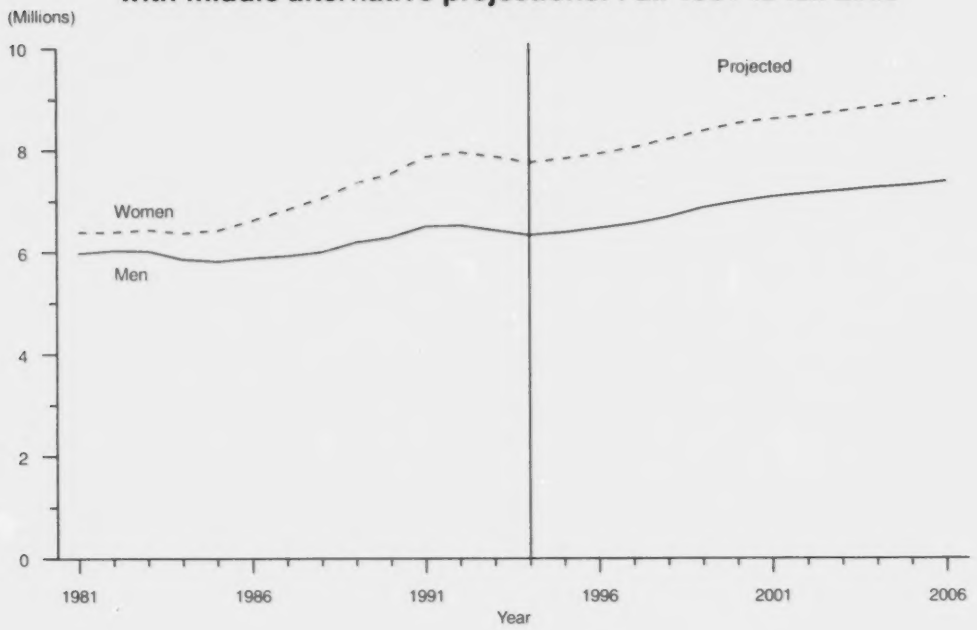

Figure 13
Average annual growth rates for total higher education enrollment, by sex
(Average annual percent)

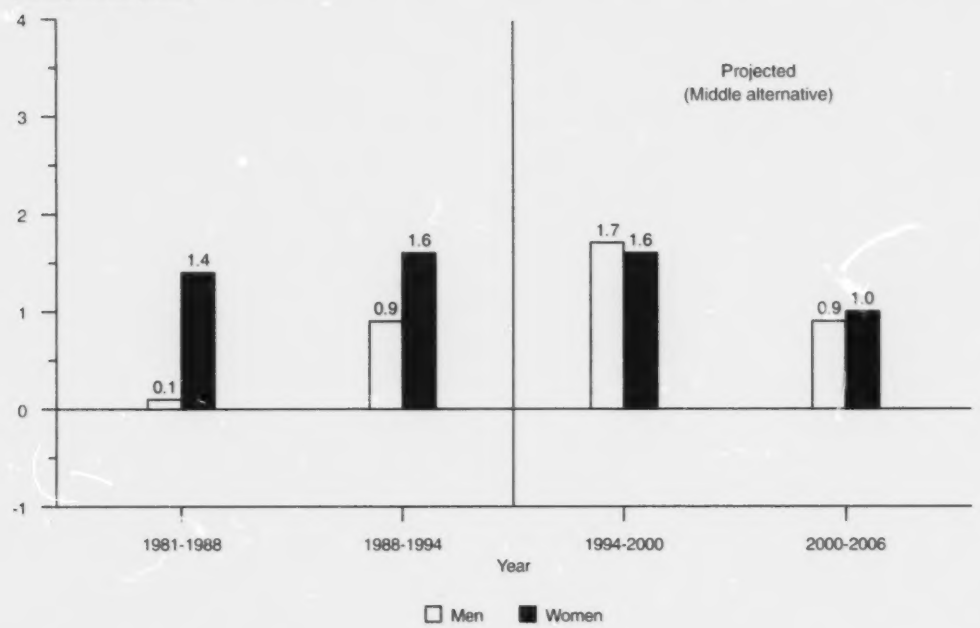

Figure 14
Enrollment in institutions of higher education, by attendance status, with middle alternative projections: Fall 1981 to fall 2006

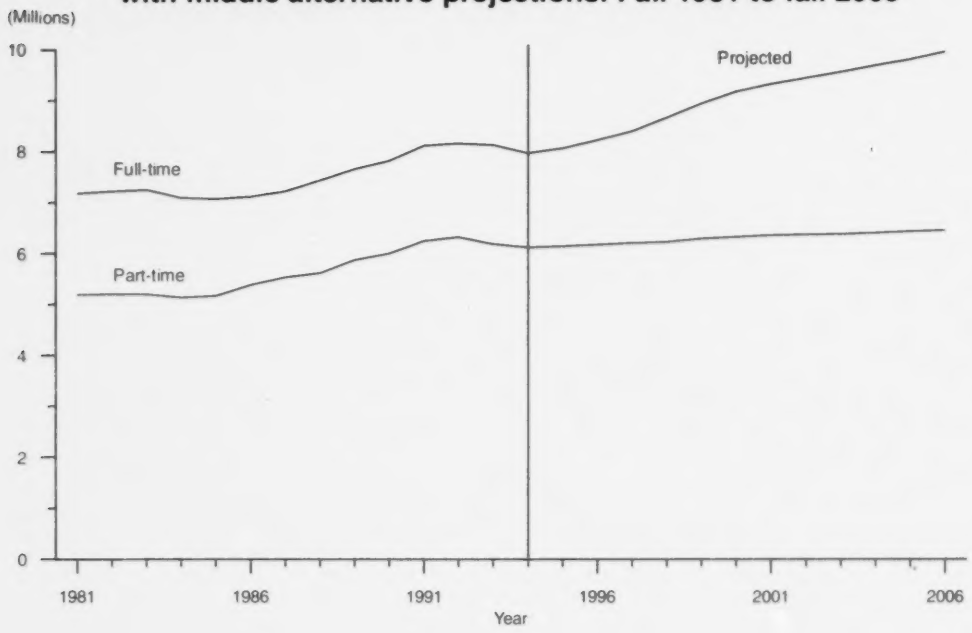

Figure 15
Average annual growth rates for total higher education enrollment, by attendance status

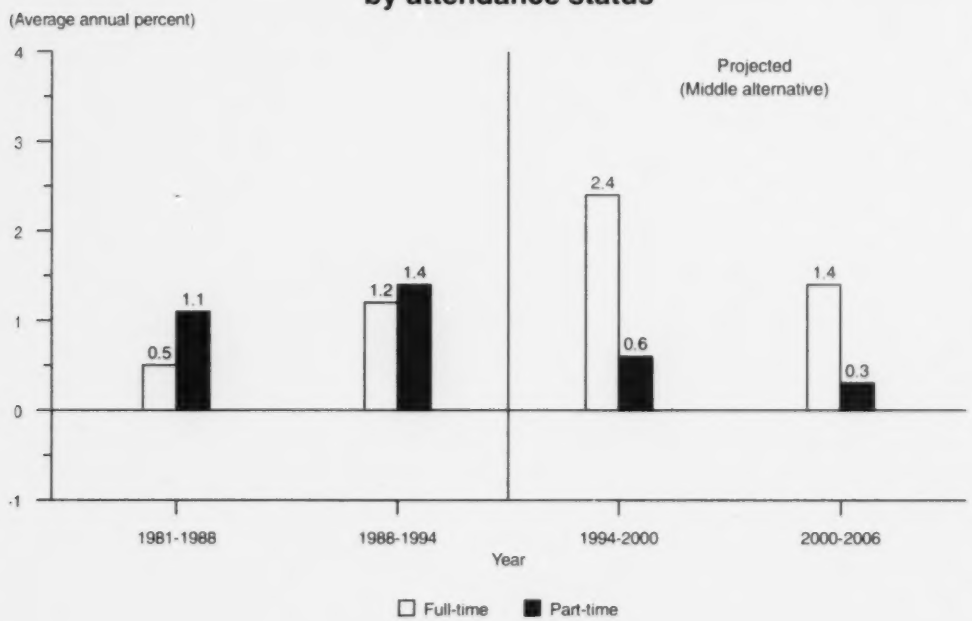

Figure 16
Enrollment in institutions of higher education, by control of institution, with alternative projections: Fall 1981 to fall 2006

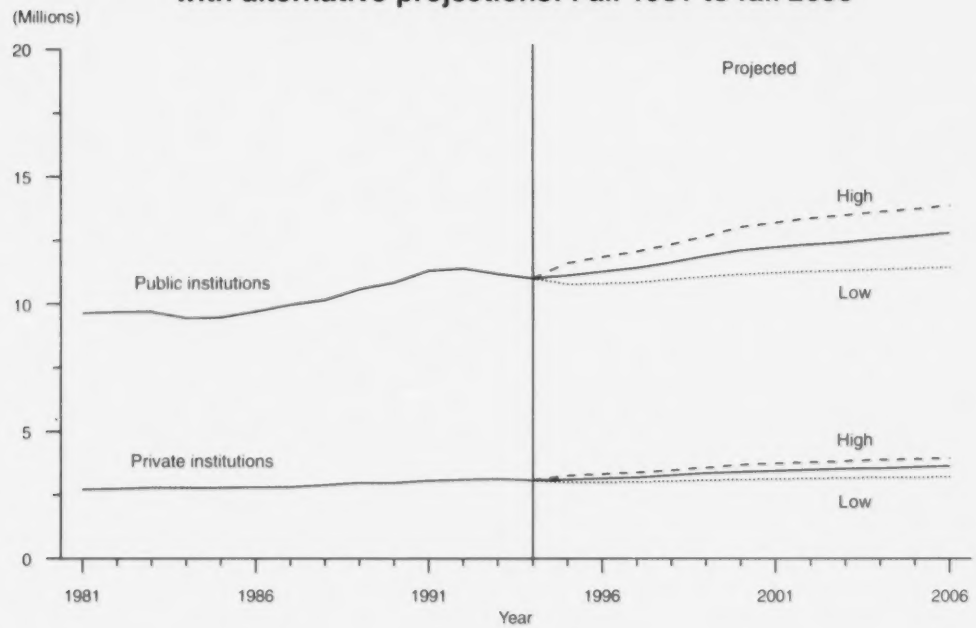

Figure 17
Average annual growth rates for total higher education enrollment, by control of institution

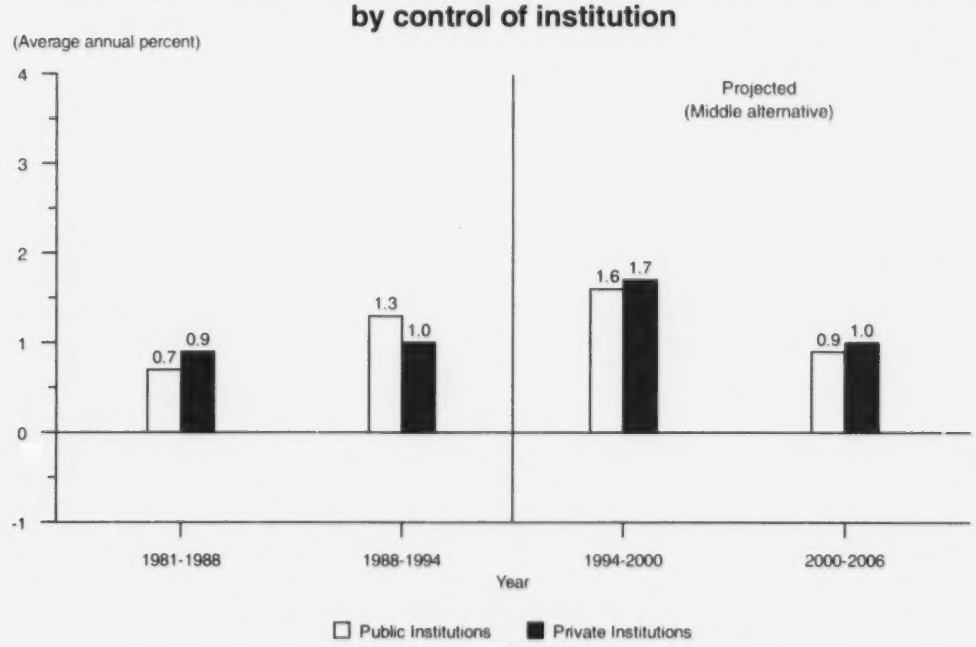

Figure 18
Enrollment in institutions of higher education, by type of institution, with alternative projections: Fall 1981 to fall 2006

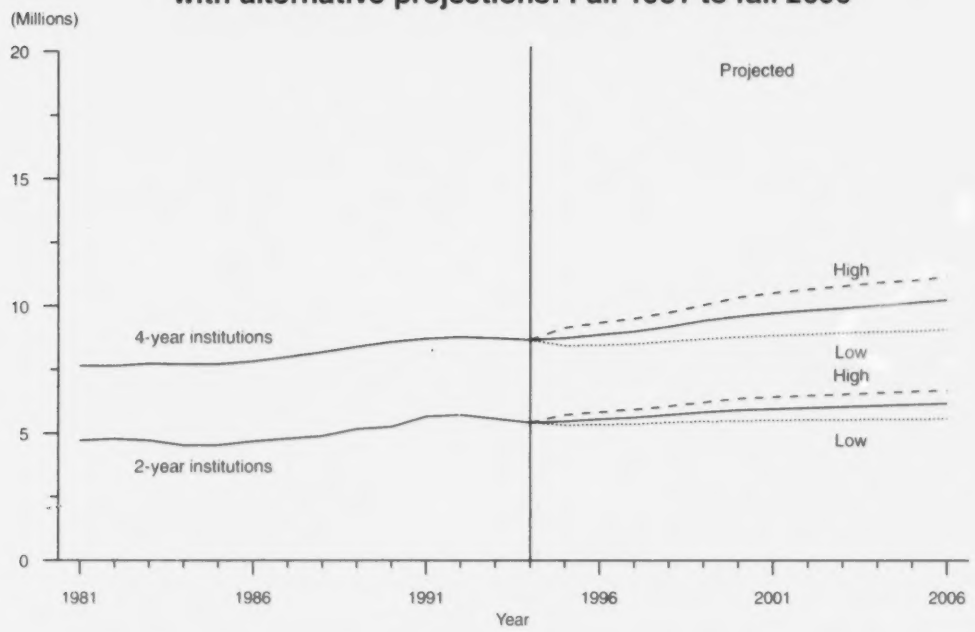

Figure 19
Average annual growth rates for total higher education enrollment, by type of institution

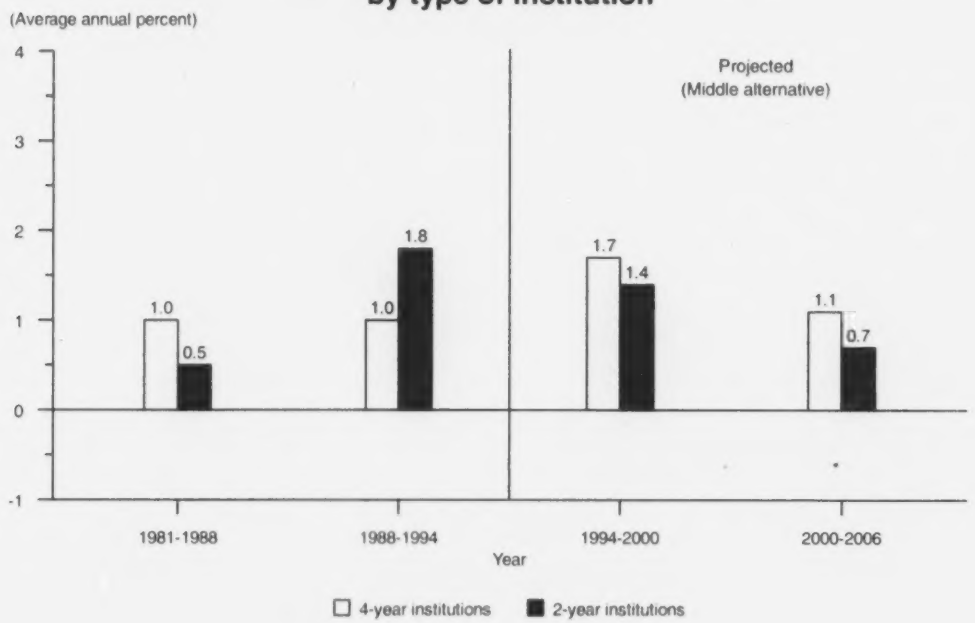

Figure 20
Undergraduate enrollment in institutions of higher education, with alternative projections: Fall 1981 to fall 2006

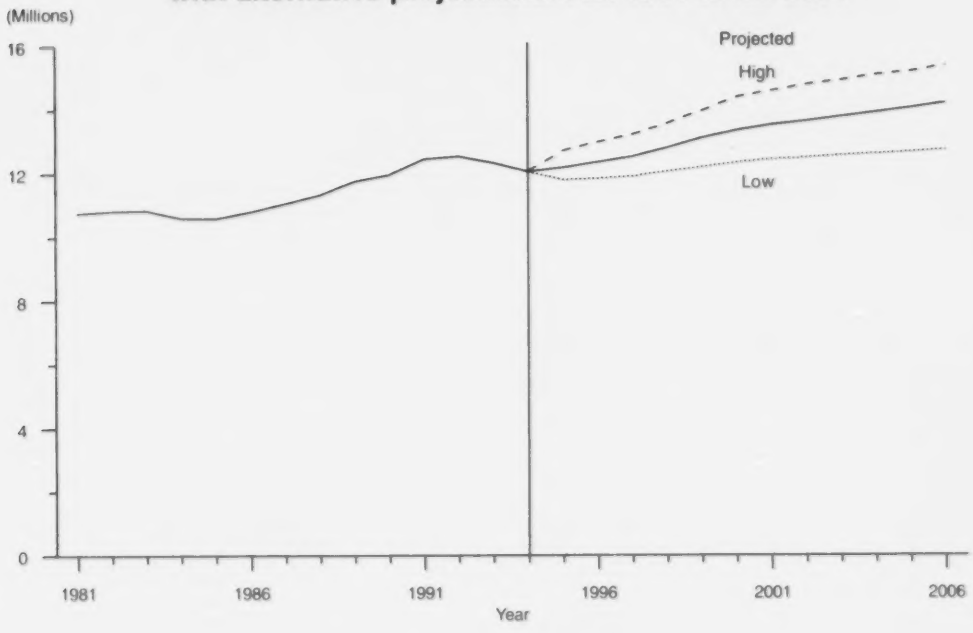

Figure 21
Average annual growth rates for undergraduate enrollment

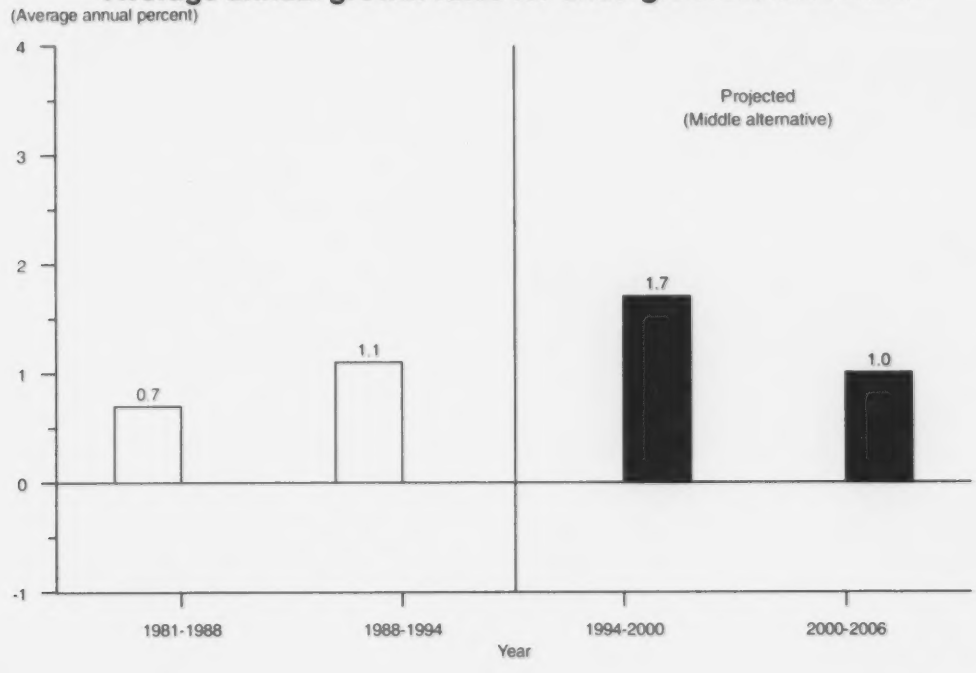

Figure 22
Postbaccalaureate enrollment in institutions of higher education, with alternative projections: Fall 1981 to fall 2006

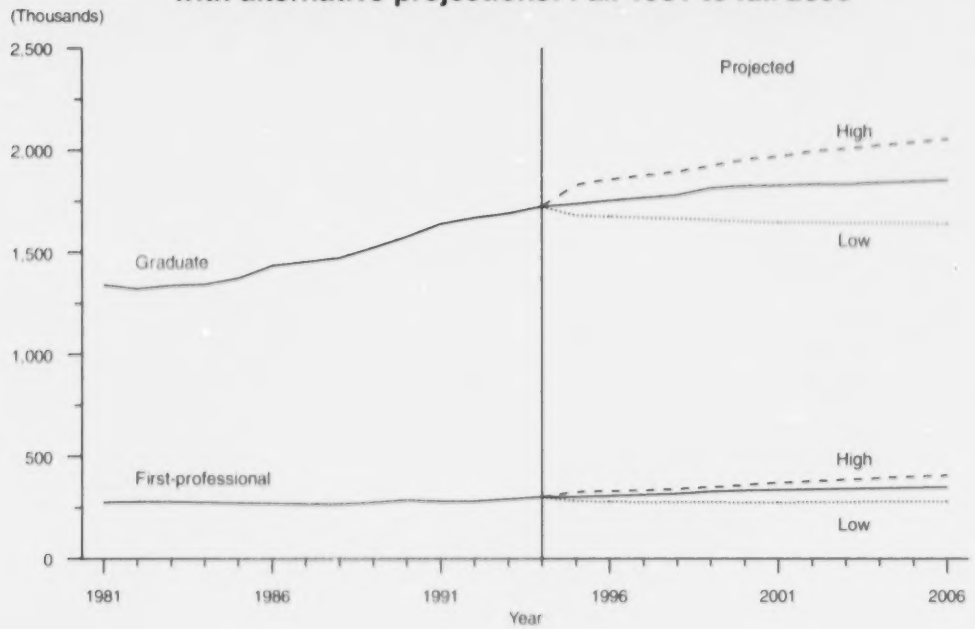

Figure 23
Average annual rates of change for postbaccalaureate enrollment

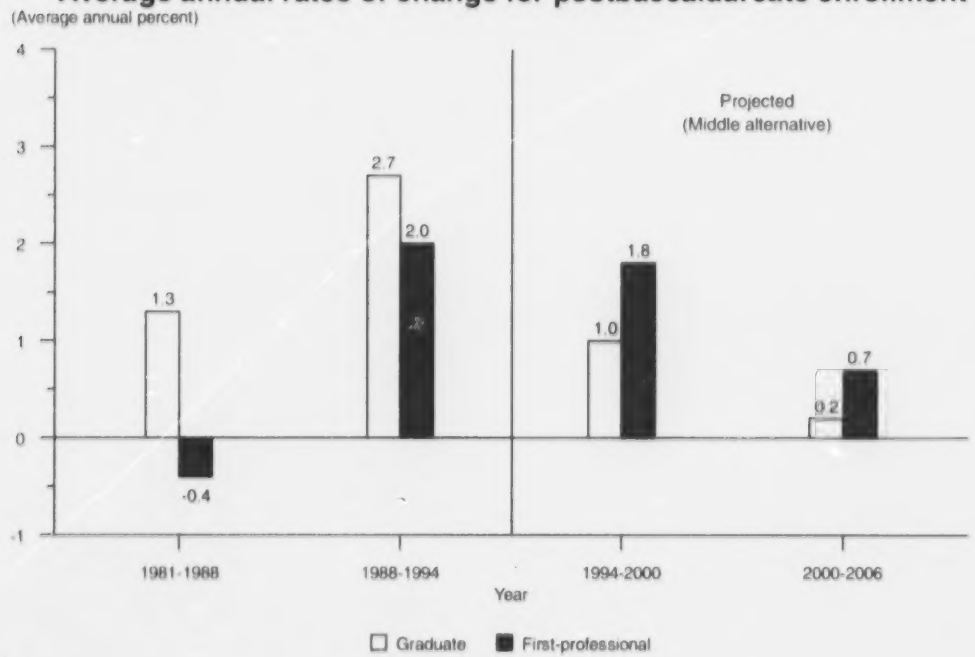

Figure 24
Full-time-equivalent enrollment in institutions of higher education, with alternative projections: Fall 1981 to fall 2006

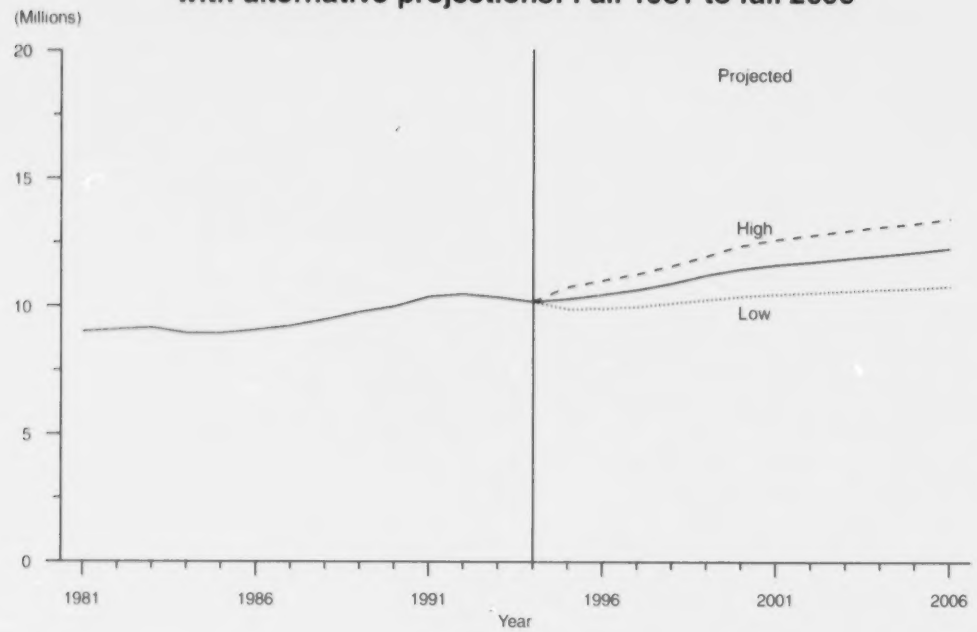

Figure 25
Average annual growth rates for full-time-equivalent enrollment

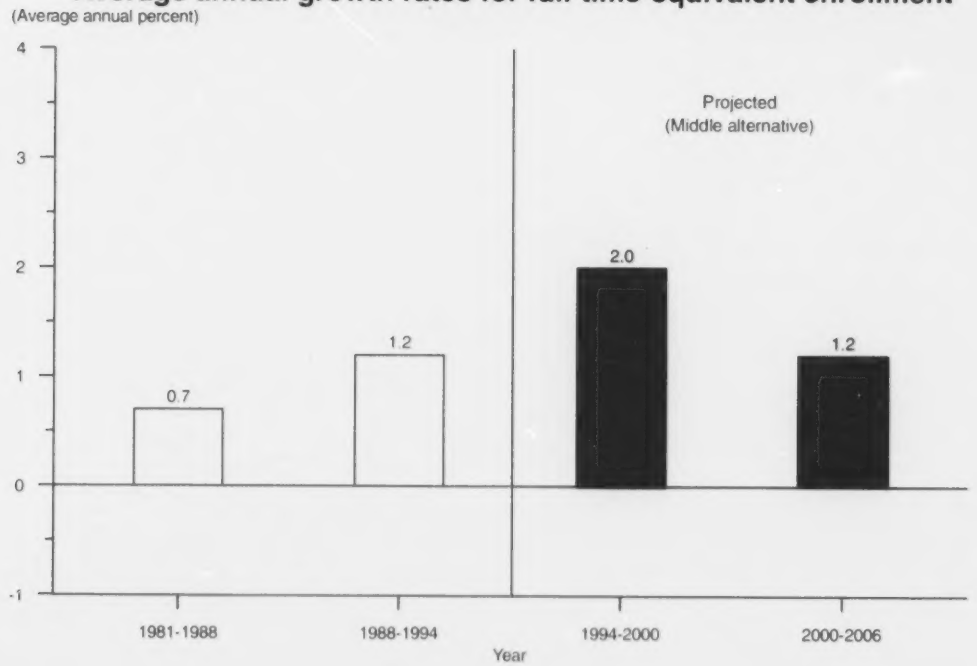

Figure 26
Enrollment in institutions of higher education, by age group, with middle alternative projections: Fall 1986, 1994, and 2006

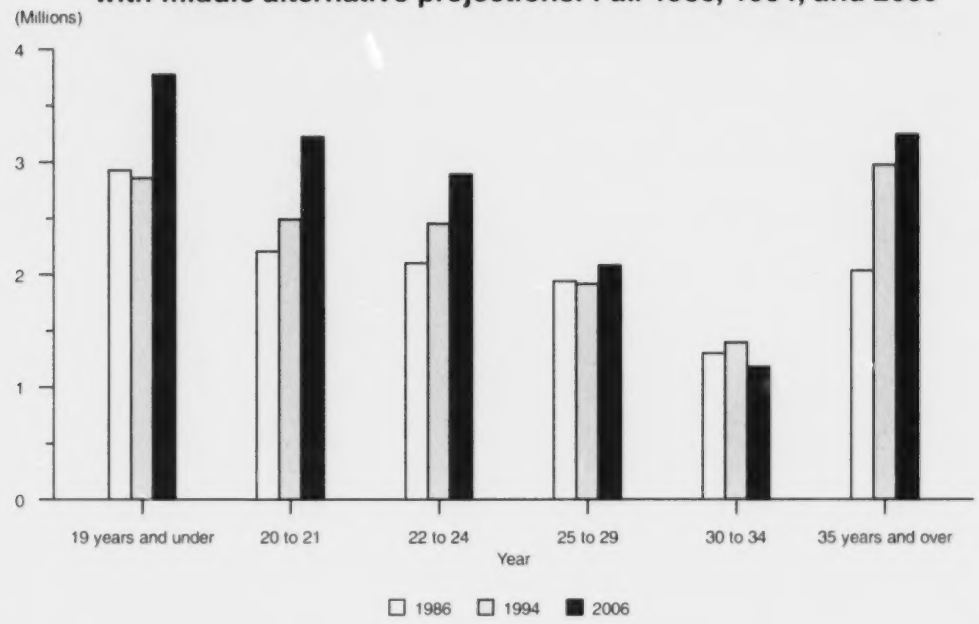

Figure 27
Enrollment of men in institutions of higher education, by age group, with middle alternative projections: Fall 1986, 1994, and 2006

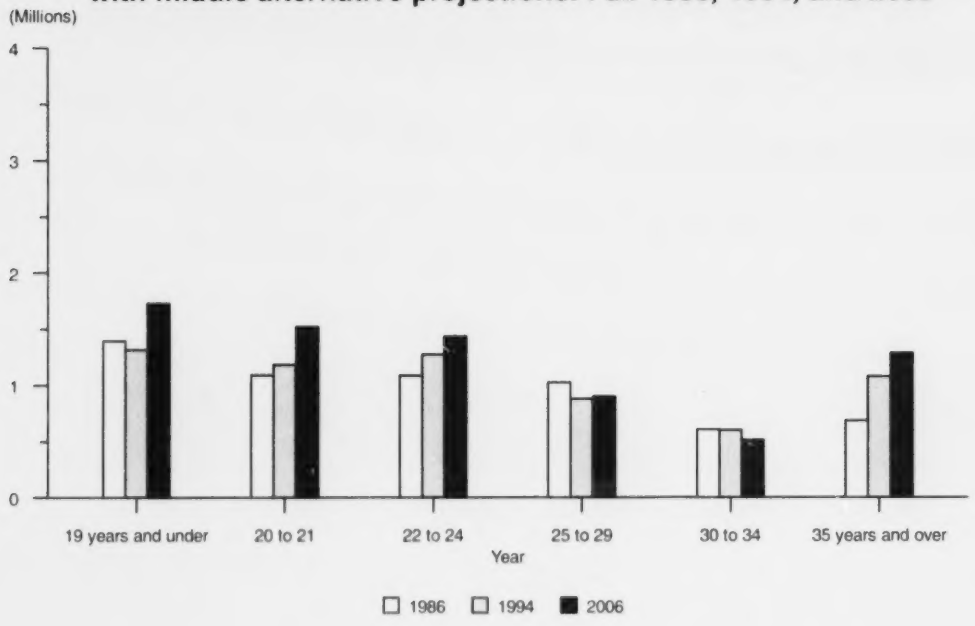

Figure 28
Enrollment of women in institutions of higher education, by age group, with middle alternative projections: Fall 1986, 1994, and 2006

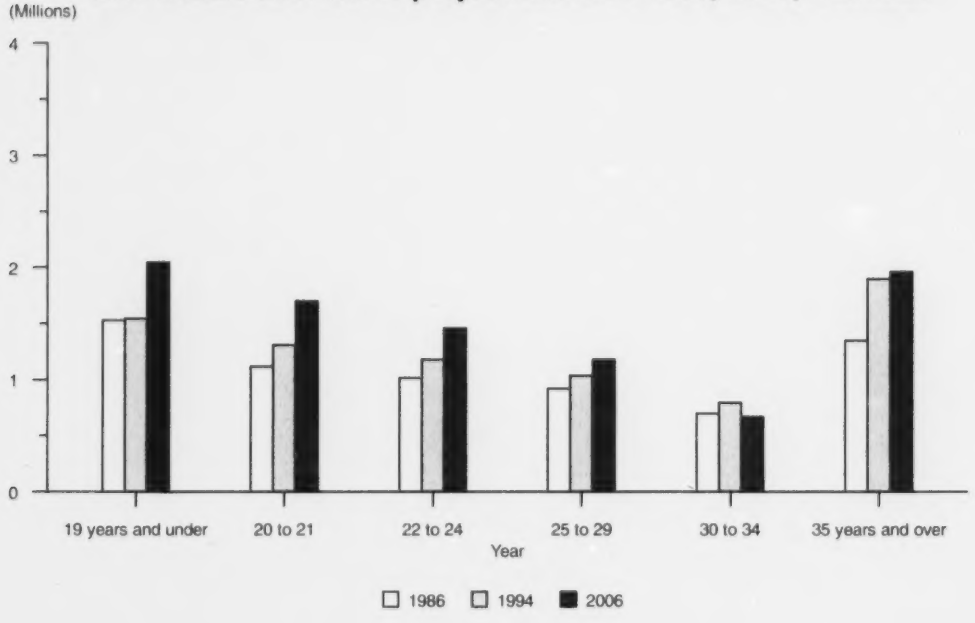

Table 3.—Total enrollment in all institutions of higher education, by sex, attendance status, and control of institution, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Sex		Attendance status		Control	
		Men	Women	Full-time	Part-time	Public	Private
1981	12,372	5,975	6,397	7,181	5,190	9,647	2,725
1982	12,426	6,031	6,394	7,221	5,205	9,696	2,730
1983	12,465	6,024	6,441	7,261	5,204	9,683	2,782
1984	12,242	5,864	6,378	7,098	5,144	9,477	2,765
1985	12,247	5,818	6,429	7,075	5,172	9,479	2,768
1986	12,504	5,885	6,619	7,120	5,384	9,714	2,790
1987	12,767	5,932	6,835	7,231	5,536	9,973	2,793
1988	13,055	6,002	7,053	7,437	5,619	10,161	2,894
1989	13,539	6,190	7,349	7,661	5,878	10,578	2,961
1990	13,820	6,284	7,535	7,821	5,998	10,845	2,975
1991	14,359	6,502	7,857	8,115	6,244	11,310	3,049
1992	14,486	6,524	7,963	8,161	6,325	11,385	3,102
1993	14,306	6,428	7,878	8,128	6,178	11,189	3,117
1994*	14,082	6,328	7,754	7,968	6,114	11,008	3,074
				Middle alternative projections			
1995	14,210	6,381	7,829	8,063	6,146	11,108	3,101
1996	14,398	6,470	7,928	8,224	6,175	11,254	3,145
1997	14,596	6,549	8,047	8,396	6,200	11,405	3,191
1998	14,886	6,681	8,205	8,655	6,231	11,627	3,259
1999	15,228	6,866	8,362	8,939	6,289	11,886	3,342
2000	15,497	6,985	8,512	9,171	6,325	12,091	3,406
2001	15,671	7,079	8,592	9,318	6,353	12,225	3,446
2002	15,798	7,137	8,660	9,433	6,364	12,319	3,479
2003	15,932	7,194	8,738	9,555	6,377	12,420	3,512
2004	16,078	7,251	8,827	9,681	6,397	12,531	3,547
2005	16,229	7,304	8,925	9,800	6,428	12,646	3,582
2006	16,389	7,375	9,014	9,943	6,446	12,768	3,621
				Low alternative projections			
1995	13,766	6,128	7,638	7,719	6,047	10,772	2,994
1996	13,785	6,125	7,659	7,740	6,044	10,789	2,995
1997	13,858	6,152	7,706	7,808	6,049	10,847	3,011
1998	14,004	6,215	7,789	7,947	6,057	10,960	3,043
1999	14,135	6,276	7,859	8,072	6,063	11,062	3,074
2000	14,256	6,333	7,924	8,192	6,065	11,153	3,103
2001	14,356	6,384	7,972	8,295	6,061	11,229	3,127
2002	14,398	6,411	7,987	8,345	6,053	11,259	3,140
2003	14,461	6,446	8,015	8,417	6,044	11,305	3,156
2004	14,525	6,482	8,042	8,485	6,039	11,352	3,172
2005	14,570	6,507	8,063	8,539	6,032	11,386	3,185
2006	14,639	6,542	8,097	8,615	6,024	11,437	3,202
				High alternative projections			
1995	14,850	6,658	8,192	8,438	6,413	11,605	3,246
1996	15,155	6,726	8,430	8,674	6,481	11,841	3,314
1997	15,425	6,778	8,647	8,891	6,534	12,049	3,376
1998	15,789	6,905	8,884	9,195	6,594	12,329	3,460
1999	16,214	7,041	9,172	9,545	6,669	12,653	3,560
2000	16,676	7,183	9,493	9,937	6,739	13,005	3,671
2001	16,914	7,353	9,561	10,166	6,748	13,182	3,732
2002	17,134	7,540	9,594	10,320	6,815	13,349	3,785
2003	17,296	7,654	9,642	10,479	6,817	13,468	3,828
2004	17,477	7,787	9,690	10,638	6,840	13,605	3,873
2005	17,613	7,886	9,727	10,769	6,845	13,705	3,908
2006	17,823	8,038	9,785	10,940	6,883	13,865	3,958

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 4.—Total enrollment in 4-year institutions of higher education, by sex, attendance status, and control of institution, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Sex		Attendance status		Control	
		Men	Women	Full-time	Part-time	Public	Private
1981	7,655	3,852	3,805	5,387	2,270	5,166	2,489
1982	7,654	3,861	3,793	5,381	2,273	5,176	2,478
1983	7,741	3,893	3,849	5,434	2,307	5,223	2,518
1984	7,711	3,847	3,864	5,395	2,317	5,198	2,513
1985	7,716	3,816	3,900	5,385	2,331	5,210	2,506
1986	7,824	3,824	4,000	5,423	2,401	5,300	2,524
1987	7,990	3,859	4,131	5,522	2,468	5,432	2,558
1988	8,180	3,912	4,268	5,693	2,487	5,546	2,634
1989	8,388	3,973	4,414	5,805	2,582	5,694	2,693
1990	8,579	4,052	4,528	5,937	2,642	5,848	2,731
1991	8,707	4,100	4,607	6,041	2,666	5,905	2,802
1992	8,764	4,110	4,654	6,081	2,683	5,900	2,864
1993	8,740	4,082	4,658	6,084	2,655	5,852	2,888
1994*	8,667	4,067	4,601	5,970	2,697	5,831	2,836
				Middle alternative projections			
1995	8,742	4,098	4,643	6,033	2,709	5,881	2,861
1996	8,859	4,157	4,702	6,141	2,718	5,960	2,899
1997	8,990	4,211	4,779	6,265	2,724	6,048	2,941
1998	9,180	4,301	4,880	6,452	2,729	6,178	3,003
1999	9,409	4,426	4,984	6,661	2,748	6,331	3,078
2000	9,593	4,508	5,085	6,837	2,756	6,456	3,137
2001	9,713	4,572	5,140	6,951	2,762	6,538	3,174
2002	9,810	4,619	5,191	7,046	2,764	6,605	3,205
2003	9,907	4,662	5,246	7,143	2,764	6,671	3,236
2004	10,007	4,703	5,304	7,238	2,769	6,739	3,268
2005	10,111	4,739	5,372	7,331	2,780	6,810	3,301
2006	10,223	4,791	5,431	7,440	2,782	6,887	3,336
				Low alternative projections			
1995	8,448	3,929	4,518	5,774	2,674	5,686	2,762
1996	8,451	3,923	4,529	5,780	2,671	5,689	2,762
1997	8,499	3,939	4,559	5,828	2,671	5,723	2,776
1998	8,595	3,979	4,616	5,927	2,668	5,790	2,805
1999	8,685	4,020	4,665	6,020	2,666	5,853	2,832
2000	8,773	4,060	4,713	6,113	2,660	5,915	2,859
2001	8,847	4,096	4,751	6,193	2,653	5,966	2,881
2002	8,885	4,118	4,767	6,238	2,647	5,992	2,893
2003	8,935	4,145	4,791	6,296	2,639	6,027	2,909
2004	8,981	4,170	4,811	6,347	2,634	6,058	2,923
2005	9,017	4,188	4,829	6,389	2,628	6,082	2,935
2006	9,068	4,213	4,855	6,448	2,620	6,118	2,950
				High alternative projections			
1995	9,139	4,269	4,869	6,314	2,825	6,145	2,994
1996	9,326	4,314	5,011	6,475	2,850	6,270	3,055
1997	9,498	4,348	5,151	6,629	2,869	6,388	3,111
1998	9,738	4,433	5,305	6,851	2,887	6,550	3,188
1999	10,021	4,527	5,494	7,108	2,913	6,742	3,279
2000	10,333	4,628	5,706	7,400	2,933	6,953	3,380
2001	10,505	4,748	5,756	7,576	2,929	7,068	3,436
2002	10,655	4,874	5,782	7,699	2,956	7,169	3,487
2003	10,775	4,958	5,817	7,823	2,952	7,249	3,526
2004	10,899	5,052	5,847	7,941	2,958	7,332	3,567
2005	10,998	5,125	5,873	8,042	2,956	7,397	3,600
2006	11,139	5,228	5,911	8,173	2,966	7,493	3,646

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 5.—Total enrollment in 2-year institutions of higher education, by sex, attendance status, and control of institution, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Sex		Attendance status		Control	
		Men	Women	Full-time	Part-time	Public	Private
1981	4,716	2,124	2,591	1,796	2,919	4,481	236
1982	4,772	2,170	2,602	1,840	2,932	4,520	252
1983	4,723	2,131	2,592	1,827	2,897	4,459	264
1984	4,531	2,017	2,514	1,704	2,827	4,279	252
1985	4,531	2,002	2,529	1,691	2,840	4,270	261
1986	4,680	2,061	2,619	1,696	2,983	4,414	266
1987	4,776	2,073	2,703	1,709	3,068	4,541	235
1988	4,875	2,090	2,785	1,744	3,132	4,615	260
1989	5,151	2,217	2,934	1,856	3,295	4,884	267
1990	5,240	2,233	3,007	1,884	3,356	4,996	244
1991	5,652	2,402	3,250	2,075	3,577	5,405	247
1992	5,722	2,413	3,309	2,080	3,642	5,485	238
1993	5,566	2,345	3,220	2,043	3,522	5,337	229
1994 *	5,415	2,261	3,154	1,998	3,417	5,177	238
			Middle alternative projections				
1995	5,468	2,283	3,185	2,030	3,438	5,227	241
1996	5,539	2,313	3,226	2,083	3,456	5,294	245
1997	5,607	2,338	3,268	2,131	3,476	5,357	250
1998	5,706	2,381	3,325	2,204	3,502	5,450	256
1999	5,819	2,441	3,379	2,278	3,541	5,556	263
2000	5,903	2,476	3,427	2,334	3,570	5,635	269
2001	5,958	2,506	3,452	2,367	3,591	5,686	272
2002	5,988	2,518	3,469	2,387	3,601	5,714	274
2003	6,025	2,532	3,493	2,412	3,613	5,749	276
2004	6,071	2,548	3,523	2,443	3,628	5,792	279
2005	6,118	2,565	3,553	2,469	3,649	5,836	281
2006	6,166	2,583	3,583	2,502	3,664	5,882	285
			Low alternative projections				
1995	5,318	2,199	3,119	1,945	3,374	5,086	232
1996	5,333	2,203	3,131	1,960	3,373	5,100	234
1997	5,359	2,213	3,146	1,981	3,379	5,124	235
1998	5,409	2,236	3,173	2,020	3,389	5,170	239
1999	5,450	2,256	3,194	2,052	3,398	5,208	242
2000	5,483	2,273	3,210	2,079	3,404	5,239	244
2001	5,509	2,288	3,221	2,102	3,408	5,263	246
2002	5,513	2,293	3,220	2,107	3,406	5,267	247
2003	5,526	2,302	3,224	2,121	3,405	5,278	248
2004	5,544	2,313	3,231	2,139	3,405	5,295	249
2005	5,553	2,319	3,234	2,150	3,404	5,303	250
2006	5,571	2,329	3,242	2,167	3,404	5,319	251
			High alternative projections				
1995	5,712	2,389	3,322	2,124	3,588	5,460	252
1996	5,830	2,411	3,419	2,199	3,631	5,571	259
1997	5,927	2,431	3,496	2,261	3,665	5,662	265
1998	6,051	2,472	3,579	2,344	3,707	5,778	273
1999	6,193	2,514	3,679	2,437	3,756	5,912	281
2000	6,343	2,556	3,787	2,537	3,806	6,052	291
2001	6,409	2,605	3,805	2,590	3,819	6,114	295
2002	6,479	2,666	3,812	2,620	3,859	6,180	299
2003	6,521	2,696	3,825	2,656	3,865	6,219	302
2004	6,578	2,736	3,843	2,696	3,882	6,273	305
2005	6,616	2,761	3,854	2,727	3,889	6,308	308
2006	6,684	2,810	3,874	2,768	3,917	6,372	312

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 6.—Enrollment in all institutions of higher education, by age, sex, and attendance status, with middle alternative projections: 50 States and D.C., fall 1986, 1991, 1994, 2001, and 2006

(In thousands)

Age	1986 (Estimated)			1991 (Estimated)			1994 (Projected)			2001 (Projected)			2006 (Projected)		
	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time
Total	**12,504**	**7,120**	**5,384**	**14,359**	**8,115**	**6,244**	**14,082**	**7,968**	**6,114**	**15,671**	**9,318**	**6,353**	**16,389**	**9,943**	**6,446**
14 to 17 years	200	182	18	120	114	6	159	137	22	183	158	24	201	174	27
18 to 19 years	2,727	2,415	312	2,714	2,407	307	2,702	2,366	336	3,346	2,908	438	3,574	3,120	454
20 to 21 years	2,206	1,813	392	2,769	2,299	470	2,491	2,042	450	2,982	2,434	547	3,221	2,626	594
22 to 24 years	2,100	1,323	777	2,287	1,497	790	2,450	1,569	881	2,559	1,685	874	2,890	1,903	987
25 to 29 years	1,941	699	1,242	2,134	868	1,266	1,914	766	1,148	1,861	745	1,115	2,082	820	1,262
30 to 34 years	1,301	333	968	1,467	401	1,066	1,394	416	978	1,289	407	882	1,181	379	802
35 years and over	2,030	355	1,675	2,867	528	2,339	2,972	672	2,300	3,452	980	2,472	3,241	920	2,322
Men	5,885	3,599	2,285	6,502	3,929	2,572	6,328	3,860	2,468	7,079	4,537	2,541	7,375	4,825	2,549
14 to 17 years	84	78	6	46	39	6	66	53	13	81	67	14	91	75	15
18 to 19 years	1,312	1,181	131	1,217	1,096	121	1,250	1,100	150	1,544	1,363	181	1,638	1,451	187
20 to 21 years	1,090	923	167	1,306	1,077	230	1,182	965	217	1,424	1,171	253	1,520	1,256	264
22 to 24 years	1,085	720	366	1,214	836	378	1,273	868	405	1,291	890	401	1,432	991	440
25 to 29 years	1,026	410	616	1,082	494	587	881	407	474	813	372	441	901	418	483
30 to 34 years	605	167	438	664	190	475	600	178	422	555	166	390	511	159	353
35 years and over	683	121	562	972	197	775	1,076	290	787	1,370	508	862	1,282	475	806
Women	6,619	3,521	3,098	7,857	4,186	3,671	7,754	4,108	3,646	8,592	4,781	3,812	9,014	5,117	3,897
14 to 17 years	116	104	12	75	75	0	93	84	9	101	91	10	110	99	11
18 to 19 years	1,415	1,234	181	1,497	1,311	186	1,453	1,266	186	1,802	1,545	258	1,936	1,669	267
20 to 21 years	1,115	890	225	1,463	1,223	240	1,309	1,077	232	1,558	1,264	295	1,701	1,371	330
22 to 24 years	1,014	604	411	1,072	661	411	1,177	701	476	1,268	794	474	1,458	911	547
25 to 29 years	916	289	626	1,053	374	679	1,033	360	674	1,048	373	674	1,181	402	778
30 to 34 years	696	166	530	803	211	591	794	238	556	734	241	492	669	220	449
35 years and over	1,347	233	1,114	1,895	331	1,563	1,896	383	1,513	2,081	472	1,610	1,960	444	1,516

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys; and U.S. Department of Commerce, Bureau of the Census, unpublished tabulations. (This table was prepared November 1995.)

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Table 7.—Enrollment in all institutions of higher education, by age, sex, and attendance status, with low alternative projections: 50 States and D.C., fall 1986, 1991, 1994, 2001, and 2006

(In thousands)

Age	1986 (Estimated)			1991 (Estimated)			1994 (Projected)			2001 (Projected)			2006 (Projected)		
	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time
Total	**12,504**	**7,120**	**5,384**	**14,359**	**8,115**	**6,244**	**14,082**	**7,968**	**6,114**	**14,356**	**8,295**	**6,061**	**14,639**	**8,615**	**6,024**
14 to 17 years	200	182	18	120	114	6	159	137	22	164	143	20	178	156	22
18 to 19 years	2,727	2,415	312	2,714	2,407	307	2,702	2,366	336	3,119	2,730	389	3,228	2,826	403
20 to 21 years	2,206	1,813	392	2,769	2,299	470	2,491	2,042	450	2,775	2,287	488	2,898	2,389	509
22 to 24 years	2,100	1,323	777	2,287	1,497	790	2,450	1,569	881	2,275	1,443	832	2,481	1,573	907
25 to 29 years	1,941	699	1,242	2,134	868	1,266	1,914	766	1,148	1,704	683	1,020	1,833	735	1,098
30 to 34 years	1,301	333	968	1,467	401	1,066	1,394	416	978	1,225	363	863	1,114	330	784
35 years and over	2,030	355	1,675	2,867	528	2,339	2,972	672	2,300	3,095	646	2,450	2,907	606	2,301
Men	5,885	3,599	2,285	6,502	3,929	2,572	6,328	3,860	2,468	6,384	3,959	2,425	6,542	4,124	2,418
14 to 17 years	84	78	6	46	39	6	66	53	13	69	59	10	75	64	11
18 to 19 years	1,312	1,181	131	1,217	1,096	121	1,250	1,100	150	1,429	1,259	170	1,479	1,303	176
20 to 21 years	1,090	923	167	1,306	1,077	230	1,182	965	217	1,319	1,085	234	1,378	1,133	245
22 to 24 years	1,085	720	366	1,214	836	378	1,273	868	405	1,170	794	377	1,275	865	410
25 to 29 years	1,026	410	616	1,082	494	587	881	407	474	787	363	424	846	390	455
30 to 34 years	605	167	438	664	190	475	600	178	422	526	156	370	476	141	335
35 years and over	683	121	562	972	197	775	1,076	290	787	1,083	243	840	1,013	227	786
Women	6,619	3,521	3,098	7,857	4,186	3,671	7,754	4,108	3,646	7,972	4,336	3,635	8,097	4,491	3,606
14 to 17 years	116	104	12	75	75	0	93	84	9	95	84	10	103	92	11
18 to 19 years	1,415	1,234	181	1,497	1,311	186	1,453	1,266	186	1,690	1,471	219	1,749	1,523	226
20 to 21 years	1,115	890	225	1,463	1,223	240	1,309	1,077	232	1,456	1,203	253	1,520	1,256	265
22 to 24 years	1,014	604	411	1,072	661	411	1,177	701	476	1,104	649	455	1,206	709	497
25 to 29 years	916	289	626	1,053	374	679	1,033	360	674	916	320	596	987	345	642
30 to 34 years	696	166	530	803	211	591	794	238	556	699	207	492	638	189	449
35 years and over	1,347	233	1,114	1,895	331	1,563	1,896	383	1,513	2,012	402	1,610	1,895	379	1,516

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys; and U.S. Department of Commerce, Bureau of the Census, unpublished tabulations. (This table was prepared November 1995.)

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Table 8.—Enrollment in all institutions of higher education, by age, sex, and attendance status, with high alternative projections: 50 States and D.C., fall 1986, 1991, 1994, 2001, and 2006

(In thousands)

Age	1986 (Estimated)			1991 (Estimated)			1994 (Projected)			2001 (Projected)			2006 (Projected)		
	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time
Total	**12,504**	**7,120**	**5,384**	**14,359**	**8,115**	**6,244**	**14,082**	**7,968**	**6,114**	**16,914**	**10,166**	**6,748**	**17,823**	**10,940**	**6,883**
14 to 17 years	200	182	18	120	114	6	159	137	22	193	165	29	214	183	31
18 to 19 years	2,727	2,415	312	2,714	2,407	307	2,702	2,366	336	3,589	3,131	458	3,791	3,303	488
20 to 21 years	2,206	1,813	392	2,769	2,299	470	2,491	2,042	450	3,238	2,655	583	3,458	2,831	628
22 to 24 years	2,100	1,323	777	2,287	1,497	790	2,450	1,569	881	2,791	1,785	1,006	3,142	2,002	1,141
25 to 29 years	1,941	699	1,242	2,134	868	1,266	1,914	766	1,148	2,101	813	1,288	2,307	902	1,405
30 to 34 years	1,301	333	968	1,467	401	1,066	1,394	416	978	1,353	461	892	1,256	428	828
35 years and over	2,030	355	1,675	2,867	528	2,339	2,972	672	2,300	3,649	1,156	2,494	3,654	1,291	2,363
Men	5,885	3,599	2,285	6,502	3,929	2,572	6,328	3,860	2,468	7,353	4,724	2,629	8,038	5,308	2,730
14 to 17 years	84	78	6	46	39	6	66	53	13	87	69	18	99	79	20
18 to 19 years	1,312	1,181	131	1,217	1,096	121	1,250	1,100	150	1,573	1,380	193	1,692	1,490	202
20 to 21 years	1,090	923	167	1,306	1,077	230	1,182	965	217	1,444	1,179	265	1,569	1,290	279
22 to 24 years	1,085	720	366	1,214	836	378	1,273	868	405	1,344	925	419	1,562	1,062	500
25 to 29 years	1,026	410	616	1,082	494	587	881	407	474	839	389	450	948	446	502
30 to 34 years	605	167	438	664	190	475	600	178	422	584	185	399	556	176	379
35 years and over	683	121	562	972	197	775	1,076	290	787	1,481	597	884	1,612	765	848
Women	6,619	3,521	3,098	7,857	4,186	3,671	7,754	4,108	3,646	9,561	5,442	4,120	9,785	5,632	4,153
14 to 17 years	116	104	12	75	75	0	93	84	9	106	96	10	115	104	11
18 to 19 years	1,415	1,234	181	1,497	1,311	186	1,453	1,266	186	2,016	1,752	264	2,099	1,813	286
20 to 21 years	1,115	890	225	1,463	1,223	240	1,309	1,077	232	1,794	1,476	318	1,890	1,541	349
22 to 24 years	1,014	604	411	1,072	661	411	1,177	701	476	1,447	860	587	1,581	940	641
25 to 29 years	916	289	626	1,053	374	679	1,033	360	674	1,262	424	838	1,359	456	903
30 to 34 years	696	166	530	803	211	591	794	238	556	768	276	492	701	252	449
35 years and over	1,347	233	1,114	1,895	331	1,563	1,896	383	1,513	2,169	559	1,610	2,042	526	1,516

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys; and U.S. Department of Commerce, Bureau of the Census, unpublished tabulations. (This table was prepared November 1995.)

Table 9.—Total enrollment in all institutions of higher education, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	12,372	3,714	2,262	3,469	2,927
1982	12,426	3,753	2,278	3,468	2,927
1983	12,465	3,760	2,264	3,501	2,940
1984	12,242	3,648	2,216	3,451	2,927
1985	12,247	3,608	2,211	3,468	2,961
1986	12,504	3,599	2,285	3,521	3,098
1987	12,767	3,611	2,321	3,620	3,214
1988	13,055	3,662	2,340	3,775	3,278
1989	13,539	3,740	2,450	3,921	3,428
1990	13,820	3,808	2,477	4,013	3,522
1991	14,359	3,929	2,572	4,186	3,671
1992	14,486	3,926	2,597	4,235	3,728
1993	14,306	3,891	2,537	4,237	3,641
1994 *	14,082	3,860	2,468	4,108	3,646
		Middle alternative projections			
1995	14,210	3,903	2,478	4,161	3,668
1996	14,398	3,989	2,481	4,235	3,694
1997	14,596	4,067	2,482	4,329	3,718
1998	14,886	4,198	2,483	4,457	3,748
1999	15,228	4,352	2,514	4,587	3,775
2000	15,497	4,458	2,526	4,713	3,799
2001	15,671	4,537	2,541	4,781	3,812
2002	15,798	4,596	2,541	4,837	3,823
2003	15,932	4,654	2,540	4,901	3,837
2004	16,078	4,712	2,540	4,970	3,857
2005	16,229	4,753	2,551	5,047	3,878
2006	16,389	4,825	2,549	5,117	3,897
		Low alternative projections			
1995	13,766	3,701	2,428	4,018	3,620
1996	13,785	3,704	2,422	4,036	3,623
1997	13,858	3,732	2,421	4,077	3,629
1998	14,004	3,793	2,421	4,154	3,635
1999	14,135	3,852	2,424	4,220	3,639
2000	14,256	3,908	2,425	4,284	3,640
2001	14,356	3,959	2,425	4,336	3,635
2002	14,398	3,987	2,425	4,359	3,628
2003	14,461	4,023	2,423	4,394	3,621
2004	14,525	4,060	2,423	4,426	3,617
2005	14,570	4,087	2,421	4,452	3,611
2006	14,639	4,124	2,418	4,491	3,606
		High alternative projections			
1995	14,850	4,049	2,609	4,389	3,803
1996	15,155	4,125	2,601	4,549	3,881
1997	15,425	4,178	2,600	4,712	3,935
1998	15,789	4,304	2,601	4,891	3,993
1999	16,214	4,428	2,614	5,117	4,055
2000	16,676	4,564	2,619	5,373	4,120
2001	16,914	4,724	2,629	5,442	4,120
2002	17,134	4,850	2,690	5,470	4,124
2003	17,296	4,964	2,689	5,514	4,128
2004	17,477	5,085	2,703	5,553	4,137
2005	17,613	5,185	2,701	5,583	4,144
2006	17,823	5,308	2,730	5,632	4,153

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 10.—Total enrollment in public 4-year institutions of higher education, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	5,166	1,877	692	1,741	858
1982	5,176	1,889	698	1,734	855
1983	5,223	1,910	698	1,755	860
1984	5,198	1,880	694	1,749	874
1985	5,210	1,864	693	1,760	893
1986	5,300	1,865	706	1,792	937
1987	5,432	1,882	723	1,854	973
1988	5,546	1,910	722	1,932	982
1989	5,694	1,938	743	1,997	1,017
1990	5,848	1,982	764	2,051	1,050
1991	5,905	2,006	765	2,083	1,050
1992	5,900	2,005	760	2,090	1,045
1993	5,852	1,989	750	2,085	1,027
1994*	5,831	1,975	755	2,038	1,064
		Middle alternative projections			
1995	5,881	1,993	757	2,062	1,069
1996	5,960	2,031	758	2,096	1,074
1997	6,048	2,069	757	2,143	1,079
1998	6,178	2,132	756	2,206	1,084
1999	6,331	2,207	763	2,272	1,089
2000	6,456	2,262	765	2,336	1,093
2001	6,538	2,304	768	2,372	1,095
2002	6,605	2,337	767	2,404	1,097
2003	6,671	2,368	765	2,438	1,100
2004	6,739	2,397	764	2,473	1,104
2005	6,810	2,420	767	2,515	1,109
2006	6,887	2,457	765	2,551	1,113
		Low alternative projections			
1995	5,686	1,894	745	1,990	1,057
1996	5,689	1,893	743	1,997	1,057
1997	5,723	1,906	741	2,017	1,058
1998	5,790	1,936	740	2,056	1,058
1999	5,853	1,966	739	2,090	1,058
2000	5,915	1,996	737	2,125	1,056
2001	5,966	2,023	735	2,154	1,054
2002	5,992	2,040	734	2,167	1,051
2003	6,027	2,060	732	2,187	1,048
2004	6,058	2,078	731	2,203	1,045
2005	6,082	2,093	730	2,217	1,043
2006	6,118	2,112	728	2,237	1,040
		High alternative projections			
1995	6,145	2,066	796	2,175	1,108
1996	6,270	2,099	794	2,251	1,127
1997	6,388	2,123	792	2,331	1,142
1998	6,550	2,183	790	2,422	1,156
1999	6,742	2,245	792	2,533	1,171
2000	6,953	2,313	792	2,661	1,187
2001	7,068	2,394	792	2,699	1,184
2002	7,169	2,459	811	2,716	1,184
2003	7,249	2,516	809	2,741	1,183
2004	7,332	2,575	812	2,760	1,184
2005	7,397	2,625	811	2,777	1,185
2006	7,493	2,687	818	2,803	1,185

*Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 11.—Total enrollment in public 2-year institutions of higher education, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	4,481	827	1,192	803	1,658
1982	4,520	851	1,195	810	1,664
1983	4,459	827	1,175	807	1,650
1984	4,279	762	1,138	756	1,623
1985	4,270	743	1,138	754	1,635
1986	4,414	742	1,193	764	1,715
1987	4,541	744	1,225	787	1,785
1988	4,615	746	1,231	822	1,817
1989	4,884	793	1,302	881	1,907
1990	4,996	811	1,318	906	1,962
1991	5,405	882	1,414	1,004	2,105
1992	5,485	878	1,431	1,037	2,138
1993	5,337	859	1,386	1,030	2,063
1994 *	5,177	847	1,311	984	2,035
		Middle alternative projections			
1995	5,227	861	1,316	1,000	2,050
1996	5,294	888	1,318	1,021	2,067
1997	5,357	909	1,320	1,044	2,083
1998	5,450	944	1,324	1,076	2,105
1999	5,556	982	1,343	1,106	2,125
2000	5,635	1,006	1,353	1,134	2,143
2001	5,686	1,023	1,363	1,147	2,153
2002	5,714	1,032	1,365	1,156	2,161
2003	5,749	1,043	1,367	1,168	2,171
2004	5,792	1,057	1,369	1,183	2,184
2005	5,836	1,065	1,376	1,198	2,197
2006	5,882	1,081	1,377	1,213	2,211
		Low alternative projections			
1995	5,086	814	1,285	968	2,019
1996	5,100	820	1,282	976	2,021
1997	5,124	829	1,283	986	2,026
1998	5,170	847	1,286	1,005	2,032
1999	5,208	861	1,291	1,020	2,037
2000	5,239	873	1,294	1,032	2,039
2001	5,263	884	1,297	1,042	2,039
2002	5,267	888	1,299	1,044	2,036
2003	5,278	894	1,300	1,050	2,034
2004	5,295	903	1,302	1,057	2,033
2005	5,303	908	1,302	1,062	2,031
2006	5,319	916	1,303	1,070	2,030
		High alternative projections			
1995	5,460	892	1,388	1,054	2,126
1996	5,571	917	1,383	1,098	2,173
1997	5,662	934	1,384	1,139	2,205
1998	5,778	968	1,389	1,180	2,242
1999	5,912	998	1,398	1,235	2,280
2000	6,052	1,029	1,405	1,296	2,322
2001	6,114	1,066	1,414	1,308	2,326
2002	6,180	1,091	1,448	1,311	2,331
2003	6,219	1,116	1,449	1,318	2,336
2004	6,273	1,145	1,458	1,326	2,343
2005	6,308	1,168	1,459	1,332	2,349
2006	6,372	1,195	1,477	1,342	2,358

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 12.—Total enrollment in private 4-year institutions of higher education, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	2,489	939	344	830	376
1982	2,478	933	341	824	380
1983	2,518	935	350	834	399
1984	2,512	926	346	839	401
1985	2,506	917	342	844	403
1986	2,524	910	343	856	415
1987	2,558	908	346	878	426
1988	2,634	933	347	918	436
1989	2,693	933	360	938	463
1990	2,731	944	361	959	467
1991	2,802	962	367	990	483
1992	2,864	970	375	1,016	503
1993	2,888	973	369	1,037	508
1994*	2,836	965	372	992	507
		Middle alternative projections			
1995	2,861	974	374	1,004	509
1996	2,899	993	374	1,020	512
1997	2,941	1,010	374	1,043	514
1998	3,003	1,041	373	1,073	516
1999	3,078	1,078	377	1,104	519
2000	3,137	1,104	377	1,136	520
2001	3,174	1,123	378	1,152	521
2002	3,205	1,138	377	1,168	522
2003	3,236	1,152	376	1,184	523
2004	3,268	1,166	375	1,201	525
2005	3,301	1,177	376	1,221	528
2006	3,336	1,194	375	1,238	529
		Low alternative projections			
1995	2,762	922	368	968	504
1996	2,762	920	367	971	504
1997	2,776	925	367	980	504
1998	2,805	937	366	997	504
1999	2,832	950	365	1,013	504
2000	2,859	963	364	1,029	503
2001	2,881	975	363	1,042	502
2002	2,893	983	362	1,048	500
2003	2,909	992	360	1,058	499
2004	2,923	1,000	360	1,066	498
2005	2,935	1,007	358	1,072	497
2006	2,950	1,016	357	1,082	495
		High alternative projections			
1995	2,994	1,014	393	1,060	528
1996	3,055	1,030	392	1,096	537
1997	3,111	1,041	391	1,135	544
1998	3,188	1,070	390	1,177	550
1999	3,279	1,099	391	1,231	558
2000	3,380	1,133	390	1,293	565
2001	3,436	1,173	390	1,310	563
2002	3,487	1,206	399	1,319	563
2003	3,526	1,235	397	1,331	563
2004	3,567	1,266	399	1,340	563
2005	3,600	1,292	397	1,348	563
2006	3,646	1,323	400	1,360	563

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 13.—Total enrollment in private 2-year institutions of higher education, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	236	71	34	95	35
1982	252	80	45	99	28
1983	264	88	41	105	30
1984	252	79	37	106	29
1985	261	84	38	110	30
1986	266	83	43	108	32
1987	235	76	30	102	29
1988	260	73	40	103	44
1989	267	76	45	105	41
1990	244	71	34	96	43
1991	247	80	27	109	32
1992	238	74	30	91	43
1993	229	70	31	85	43
1994 *	238	73	30	94	41
Middle alternative projections					
1995	241	74	30	95	41
1996	245	77	31	97	41
1997	250	78	31	99	42
1998	256	82	31	102	42
1999	263	85	31	105	42
2000	269	87	31	108	43
2001	272	88	32	109	43
2002	274	89	32	110	43
2003	276	90	32	111	43
2004	279	91	32	112	44
2005	281	92	32	114	44
2006	285	93	32	115	44
Low alternative projections					
1995	232	70	30	92	40
1996	234	71	30	93	40
1997	235	72	30	94	40
1998	239	73	30	95	41
1999	242	74	30	97	41
2000	244	75	30	98	41
2001	246	76	30	99	41
2002	247	77	30	99	41
2003	248	77	30	100	41
2004	249	78	30	100	41
2005	250	78	30	101	41
2006	251	79	30	102	41
High alternative projections					
1995	252	77	32	100	42
1996	259	79	32	104	43
1997	265	81	32	108	44
1998	273	84	32	112	45
1999	281	86	32	117	46
2000	291	89	33	123	46
2001	295	92	33	124	46
2002	299	94	34	125	47
2003	302	96	34	125	47
2004	305	99	34	126	47
2005	308	101	34	127	47
2006	312	103	34	127	47

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 14.—Undergraduate enrollment in all institutions, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	10,755	3,261	1,848	3,188	2,458
1982	10,825	3,299	1,871	3,184	2,470
1983	10,846	3,304	1,854	3,210	2,478
1984	10,618	3,195	1,812	3,153	2,459
1985	10,597	3,156	1,806	3,163	2,471
1986	10,798	3,146	1,871	3,206	2,575
1987	11,046	3,164	1,905	3,299	2,679
1988	11,317	3,206	1,931	3,436	2,743
1989	11,742	3,279	2,032	3,562	2,869
1990	11,959	3,337	2,043	3,640	2,940
1991	12,439	3,436	2,135	3,786	3,082
1992	12,537	3,424	2,158	3,819	3,135
1993	12,324	3,382	2,102	3,797	3,043
1994*	12,057	3,328	2,015	3,688	3,026
		Middle alternative projections			
1995	12,171	3,368	2,021	3,737	3,045
1996	12,336	3,442	2,022	3,806	3,066
1997	12,519	3,514	2,024	3,893	3,088
1998	12,786	3,630	2,026	4,013	3,116
1999	13,085	3,758	2,053	4,132	3,143
2000	13,336	3,856	2,066	4,247	3,167
2001	13,508	3,934	2,081	4,312	3,181
2002	13,627	3,986	2,083	4,363	3,194
2003	13,757	4,041	2,085	4,422	3,209
2004	13,893	4,093	2,088	4,485	3,227
2005	14,035	4,132	2,100	4,557	3,247
2006	14,189	4,199	2,101	4,623	3,265
		Low alternative projections			
1995	11,799	3,209	1,976	3,613	3,001
1996	11,829	3,220	1,970	3,637	3,003
1997	11,908	3,251	1,969	3,680	3,008
1998	12,063	3,317	1,972	3,759	3,015
1999	12,198	3,377	1,976	3,825	3,021
2000	12,327	3,435	1,979	3,889	3,024
2001	12,432	3,485	1,983	3,941	3,023
2002	12,474	3,511	1,984	3,960	3,019
2003	12,539	3,545	1,986	3,993	3,015
2004	12,600	3,577	1,988	4,021	3,013
2005	12,646	3,602	1,989	4,045	3,010
2006	12,718	3,638	1,990	4,083	3,007
		High alternative projections			
1995	12,697	3,473	2,129	3,936	3,159
1996	12,966	3,538	2,120	4,083	3,225
1997	13,215	3,590	2,120	4,234	3,271
1998	13,554	3,701	2,123	4,406	3,324
1999	13,940	3,812	2,136	4,614	3,379
2000	14,360	3,931	2,144	4,846	3,438
2001	14,575	4,064	2,155	4,913	3,443
2002	14,760	4,165	2,208	4,937	3,450
2003	14,904	4,260	2,210	4,978	3,457
2004	15,059	4,356	2,224	5,012	3,467
2005	15,174	4,435	2,225	5,039	3,474
2006	15,362	4,537	2,253	5,087	3,485

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

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Table 15.—Undergraduate enrollment in public institutions, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	8,648	2,452	1,639	2,373	2,185
1982	8,713	2,487	1,653	2,373	2,201
1983	8,697	2,482	1,635	2,385	2,195
1984	8,494	2,390	1,600	2,325	2,179
1985	8,478	2,357	1,596	2,331	2,193
1986	8,661	2,351	1,652	2,367	2,291
1987	8,919	2,375	1,701	2,449	2,393
1988	9,103	2,399	1,714	2,550	2,439
1989	9,488	2,470	1,801	2,663	2,553
1990	9,710	2,527	1,826	2,734	2,623
1991	10,148	2,610	1,921	2,851	2,766
1992	10,216	2,602	1,935	2,883	2,797
1993	10,012	2,566	1,882	2,860	2,704
1994*	9,792	2,524	1,800	2,775	2,693
		Middle alternative projections			
1995	9,884	2,555	1,806	2,813	2,710
1996	10,016	2,614	1,807	2,865	2,730
1997	10,159	2,669	1,809	2,931	2,750
1998	10,368	2,758	1,812	3,021	2,776
1999	10,603	2,856	1,836	3,110	2,800
2000	10,797	2,931	1,848	3,196	2,822
2001	10,930	2,989	1,861	3,244	2,835
2002	11,019	3,028	1,864	3,281	2,846
2003	11,118	3,069	1,866	3,325	2,859
2004	11,223	3,108	1,868	3,372	2,876
2005	11,333	3,137	1,878	3,425	2,893
2006	11,452	3,188	1,880	3,474	2,910
		Low alternative projections			
1995	9,589	2,434	1,765	2,720	2,671
1996	9,613	2,442	1,760	2,739	2,672
1997	9,674	2,466	1,760	2,771	2,677
1998	9,792	2,516	1,762	2,829	2,684
1999	9,896	2,562	1,767	2,878	2,689
2000	9,992	2,605	1,770	2,925	2,692
2001	10,071	2,643	1,773	2,963	2,692
2002	10,101	2,661	1,775	2,977	2,688
2003	10,149	2,687	1,776	3,001	2,685
2004	10,195	2,711	1,778	3,022	2,683
2005	10,229	2,730	1,779	3,040	2,680
2006	10,283	2,757	1,780	3,068	2,678
		High alternative projections			
1995	10,313	2,636	1,903	2,963	2,811
1996	10,529	2,687	1,895	3,075	2,871
1997	10,724	2,728	1,895	3,189	2,913
1998	10,989	2,814	1,899	3,317	2,960
1999	11,290	2,898	1,910	3,473	3,009
2000	11,617	2,989	1,918	3,648	3,062
2001	11,782	3,090	1,929	3,697	3,067
2002	11,929	3,167	1,975	3,714	3,073
2003	12,039	3,239	1,977	3,744	3,079
2004	12,160	3,313	1,990	3,769	3,088
2005	12,249	3,373	1,991	3,789	3,095
2006	12,397	3,451	2,016	3,824	3,105

*Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 16.—Undergraduate enrollment in private institutions, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	2,106	809	209	816	272
1982	2,112	812	219	811	270
1983	2,149	823	219	824	283
1984	2,124	805	212	827	280
1985	2,120	800	210	832	278
1986	2,137	796	219	839	284
1987	2,128	788	204	850	286
1988	2,213	807	217	886	304
1989	2,255	808	231	899	316
1990	2,250	810	217	905	317
1991	2,291	825	215	935	316
1992	2,320	823	223	936	338
1993	2,312	816	220	937	338
1994*	2,264	804	215	912	333
Middle alternative projections					
1995	2,286	812	215	924	335
1996	2,320	829	215	940	336
1997	2,360	845	215	962	338
1998	2,419	872	215	992	340
1999	2,483	901	217	1,021	343
2000	2,539	925	218	1,051	345
2001	2,579	945	219	1,068	346
2002	2,608	959	220	1,082	348
2003	2,639	973	220	1,097	350
2004	2,669	985	220	1,113	351
2005	2,702	995	221	1,132	354
2006	2,737	1,011	221	1,149	355
Low alternative projections					
1995	2,210	776	211	893	330
1996	2,216	777	210	899	330
1997	2,234	785	210	909	330
1998	2,270	801	209	930	331
1999	2,302	815	209	947	331
2000	2,334	830	209	964	331
2001	2,361	843	209	978	331
2002	2,373	849	210	983	331
2003	2,390	858	210	992	330
2004	2,405	866	210	999	330
2005	2,417	872	210	1,005	330
2006	2,435	881	210	1,015	329
High alternative projections					
1995	2,383	837	226	973	348
1996	2,438	850	225	1,008	354
1997	2,491	862	225	1,045	359
1998	2,566	888	224	1,089	364
1999	2,650	914	225	1,140	370
2000	2,743	943	226	1,199	376
2001	2,793	974	227	1,216	376
2002	2,831	998	233	1,223	377
2003	2,865	1,021	233	1,234	377
2004	2,899	1,043	234	1,243	378
2005	2,925	1,062	234	1,250	379
2006	2,966	1,086	237	1,263	380

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 17.—Graduate enrollment in all institutions, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	1,343	277	397	207	462
1982	1,322	280	390	205	447
1983	1,340	286	391	211	452
1984	1,345	286	386	215	459
1985	1,376	289	388	220	479
1986	1,435	294	399	228	514
1987	1,452	294	400	233	525
1988	1,472	304	393	249	526
1989	1,522	309	401	263	548
1990	1,586	321	416	278	571
1991	1,639	341	419	300	578
1992	1,669	351	421	314	582
1993	1,689	355	417	334	584
1994 *	1,724	367	434	316	607
		Middle alternative projections			
1995	1,736	369	438	318	611
1996	1,754	377	440	323	615
1997	1,765	382	439	327	617
1998	1,781	392	437	334	618
1999	1,813	410	442	342	619
2000	1,826	415	441	350	619
2001	1,827	416	441	352	617
2002	1,832	421	438	356	617
2003	1,834	423	435	360	616
2004	1,841	427	433	364	617
2005	1,847	429	432	368	618
2006	1,851	432	429	371	619
		Low alternative projections			
1995	1,682	339	433	304	606
1996	1,675	334	433	300	608
1997	1,670	331	433	298	608
1998	1,664	329	431	297	607
1999	1,660	328	429	297	606
2000	1,653	327	427	297	603
2001	1,648	327	424	297	600
2002	1,646	329	422	299	597
2003	1,644	330	419	301	593
2004	1,644	333	416	304	591
2005	1,642	334	414	306	589
2006	1,639	335	411	306	586
		High alternative projections			
1995	1,829	397	460	340	631
1996	1,857	405	461	350	642
1997	1,875	406	460	359	649
1998	1,893	416	458	364	655
1999	1,923	425	458	378	662
2000	1,955	437	456	396	667
2001	1,969	455	453	397	663
2002	1,995	473	462	400	660
2003	2,006	486	459	403	658
2004	2,024	503	458	406	657
2005	2,038	518	456	408	656
2006	2,053	532	457	409	655

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 18.—Graduate enrollment in public institutions, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	887	177	242	138	329
1982	870	180	237	136	317
1983	872	184	235	140	313
1984	870	182	229	142	317
1985	891	181	232	144	333
1986	941	188	244	150	358
1987	945	185	244	152	364
1988	949	193	236	163	357
1989	978	195	242	171	369
1990	1,023	203	253	180	388
1991	1,050	215	255	192	388
1992	1,058	221	253	200	384
1993	1,064	221	252	207	383
1994 *	1,097	230	262	200	404
Middle alternative projections					
1995	1,104	232	264	202	406
1996	1,115	237	266	204	408
1997	1,123	240	265	208	410
1998	1,133	246	264	212	411
1999	1,153	257	267	217	411
2000	1,161	261	267	222	411
2001	1,161	262	266	223	410
2002	1,165	264	265	226	410
2003	1,166	266	263	228	409
2004	1,170	268	261	231	410
2005	1,174	269	261	233	411
2006	1,177	271	259	235	411
Low alternative projections					
1995	1,070	213	262	193	403
1996	1,065	210	262	190	404
1997	1,063	208	261	189	404
1998	1,058	207	260	188	404
1999	1,056	206	259	188	403
2000	1,052	205	258	188	401
2001	1,048	205	256	188	399
2002	1,047	206	255	190	396
2003	1,046	208	253	191	394
2004	1,046	209	251	193	393
2005	1,045	210	250	194	391
2006	1,042	210	248	194	390
High alternative projections					
1995	1,163	250	278	216	419
1996	1,181	254	278	222	426
1997	1,192	255	278	228	431
1998	1,204	261	277	231	435
1999	1,223	267	277	240	440
2000	1,244	274	275	251	443
2001	1,252	286	274	252	440
2002	1,268	297	279	254	439
2003	1,275	306	277	255	437
2004	1,286	316	277	257	436
2005	1,295	325	275	259	436
2006	1,305	334	276	260	435

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 19.—Graduate enrollment in private institutions, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	456	100	155	69	132
1982	453	100	153	69	131
1983	468	103	156	71	138
1984	476	104	156	75	142
1985	486	108	156	76	147
1986	494	106	155	78	156
1987	507	108	156	82	161
1988	522	111	157	86	168
1989	544	114	159	92	179
1990	563	118	163	98	184
1991	589	126	164	109	190
1992	611	130	168	114	198
1993	626	133	165	126	201
1994*	628	136	172	116	204
Middle alternative projections					
1995	632	137	173	117	205
1996	639	140	174	118	206
1997	643	142	174	120	207
1998	649	146	173	122	208
1999	660	152	175	125	208
2000	665	154	175	128	208
2001	665	155	175	129	207
2002	667	156	174	130	207
2003	668	157	172	132	207
2004	670	159	171	133	207
2005	673	159	171	135	207
2006	674	161	170	136	208
Low alternative projections					
1995	612	126	171	111	203
1996	609	124	171	110	204
1997	608	123	171	109	204
1998	605	122	171	109	204
1999	604	122	170	109	203
2000	601	121	169	109	203
2001	599	121	168	109	201
2002	599	122	167	110	200
2003	598	123	166	110	199
2004	598	124	165	111	198
2005	598	124	164	112	198
2006	596	125	163	112	197
High alternative projections					
1995	666	148	182	125	212
1996	676	151	182	128	215
1997	683	151	182	132	218
1998	689	155	181	133	220
1999	700	158	181	139	222
2000	712	162	180	145	224
2001	717	169	179	145	222
2002	727	176	183	147	222
2003	731	181	182	148	221
2004	737	187	181	149	220
2005	742	193	180	150	220
2006	748	198	181	150	220

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 20.—First-professional enrollment in all institutions, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	275	175	18	73	9
1982	278	174	17	78	9
1983	279	169	19	81	10
1984	279	166	19	83	10
1985	274	162	17	84	10
1986	270	159	15	87	9
1987	268	154	16	88	10
1988	267	151	16	90	10
1989	274	153	16	95	10
1990	274	150	17	96	11
1991	281	152	18	100	11
1992	281	151	18	101	11
1993	292	154	19	106	14
1994*	301	165	19	105	13
Middle alternative projections					
1995	303	166	19	105	13
1996	308	169	19	107	13
1997	312	171	19	108	13
1998	319	176	19	111	13
1999	330	184	19	113	13
2000	335	187	19	116	13
2001	336	187	19	117	13
2002	339	189	19	118	13
2003	341	190	19	119	13
2004	345	192	19	121	13
2005	346	192	19	122	13
2006	349	194	19	123	13
Low alternative projections					
1995	285	152	19	101	13
1996	281	150	19	99	13
1997	279	149	19	99	13
1998	278	148	19	98	13
1999	277	147	19	98	13
2000	276	147	19	98	13
2001	276	147	19	98	13
2002	278	148	19	99	12
2003	279	148	18	100	12
2004	281	150	18	101	12
2005	282	150	18	101	12
2006	282	150	18	102	12
High alternative projections					
1995	325	179	20	113	13
1996	332	182	20	116	13
1997	335	182	20	119	14
1998	341	187	20	121	14
1999	350	191	20	125	14
2000	361	196	20	131	14
2001	370	205	20	132	14
2002	379	212	20	133	14
2003	386	218	20	134	14
2004	394	226	20	135	14
2005	402	233	20	135	14
2006	408	239	20	136	14

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 21.—First-professional enrollment in public institutions, by sex and attendance status, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	112	75	3	33	2
1982	113	73	3	35	2
1983	113	71	3	37	2
1984	114	70	3	38	2
1985	111	69	3	38	2
1986	112	67	3	39	2
1987	110	65	3	40	2
1988	109	64	2	41	2
1989	113	65	2	43	2
1990	112	63	3	44	2
1991	111	62	3	45	2
1992	111	61	3	45	2
1993	114	61	3	47	3
1994 *	119	67	3	47	2
Middle alternative projections					
1995	120	67	3	47	3
1996	122	69	3	48	3
1997	124	70	3	48	3
1998	127	71	3	49	3
1999	131	75	3	51	3
2000	133	76	3	52	3
2001	134	76	3	52	3
2002	135	77	3	53	3
2003	136	77	3	53	3
2004	138	78	3	54	3
2005	138	78	3	54	3
2006	139	79	3	55	3
Low alternative projections					
1995	113	62	3	45	2
1996	111	61	3	44	2
1997	110	60	3	44	2
1998	110	60	3	44	2
1999	109	60	3	44	2
2000	109	60	3	44	2
2001	109	60	3	44	2
2002	110	60	3	44	2
2003	110	60	3	45	2
2004	111	61	3	45	2
2005	112	61	3	45	2
2006	112	61	3	45	2
High alternative projections					
1995	129	72	4	50	3
1996	132	74	4	52	3
1997	133	74	4	53	3
1998	136	76	4	54	3
1999	140	77	4	56	3
2000	144	80	3	59	3
2001	148	83	3	59	3
2002	152	86	4	59	3
2003	154	89	4	60	3
2004	158	92	4	60	3
2005	161	94	3	60	3
2006	164	97	4	61	3

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 22.—First-professional enrollment in private institutions, by sex and attendance status, with alternative projections: 50 states and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1981	162	101	14	40	7
1982	165	101	14	43	7
1983	165	97	16	44	8
1984	164	96	16	43	8
1985	162	93	14	46	8
1986	158	91	12	48	7
1987	158	88	14	48	8
1988	158	87	14	49	8
1989	162	87	14	52	9
1990	162	86	15	52	9
1991	169	90	15	55	9
1992	170	90	15	56	9
1993	179	93	16	59	11
1994*	182	98	16	58	10
		Middle alternative projections			
1995	183	99	16	58	10
1996	186	101	16	59	10
1997	188	102	16	60	10
1998	192	105	16	61	10
1999	199	109	16	63	10
2000	202	111	16	64	10
2001	202	111	16	65	10
2002	204	112	16	65	10
2003	205	113	16	66	10
2004	207	114	16	67	10
2005	208	114	16	68	10
2006	209	115	16	68	10
		Low alternative projections			
1995	172	91	16	56	10
1996	170	89	16	55	10
1997	169	88	16	55	10
1998	168	88	16	54	10
1999	168	88	16	54	10
2000	167	87	15	54	10
2001	167	87	15	54	10
2002	168	88	15	55	10
2003	169	88	15	55	10
2004	170	89	15	56	10
2005	170	89	15	56	10
2006	170	89	15	56	10
		High alternative projections			
1995	196	106	17	62	11
1996	200	108	17	64	11
1997	202	108	17	66	11
1998	205	111	17	67	11
1999	211	113	17	69	11
2000	217	117	17	73	11
2001	222	122	16	73	11
2002	227	126	17	73	11
2003	231	130	17	74	11
2004	236	134	17	75	11
2005	241	138	17	75	11
2006	245	142	17	75	11

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 23.—Full-time-equivalent enrollment in all institutions of higher education, by level of student and type of institution, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Undergraduate		Graduate	First-professional
		4-year	2-year	4-year	4-year
1981	9,015	5,188	2,765	801	262
1982	9,092	5,194	2,843	790	266
1983	9,166	5,254	2,841	805	266
1984	8,952	5,215	2,659	814	263
1985	8,943	5,204	2,649	829	261
1986	9,064	5,241	2,704	859	259
1987	9,230	5,363	2,743	868	256
1988	9,467	5,517	2,800	892	256
1989	9,781	5,628	2,967	922	265
1990	9,984	5,744	3,016	963	261
1991	10,361	5,804	3,280	1,010	267
1992	10,436	5,822	3,308	1,036	270
1993	10,352	5,785	3,230	1,057	279
1994*	10,179	5,667	3,157	1,068	288
		Middle alternative projections			
*1995	10,286	5,725	3,196	1,075	290
1996	10,457	5,817	3,255	1,089	295
1997	10,638	5,930	3,310	1,100	298
1998	10,908	6,096	3,392	1,116	305
1999	11,213	6,273	3,479	1,144	316
2000	11,457	6,434	3,545	1,157	321
2001	11,614	6,547	3,585	1,159	322
2002	11,733	6,633	3,608	1,167	325
2003	11,860	6,723	3,637	1,171	327
2004	11,993	6,809	3,674	1,179	331
2005	12,123	6,899	3,707	1,185	333
2006	12,272	7,001	3,745	1,191	335
		Low alternative projections			
1995	9,906	5,519	3,089	1,027	271
1996	9,926	5,536	3,104	1,019	268
1997	9,996	5,590	3,127	1,014	266
1998	10,137	5,694	3,170	1,009	264
1999	10,265	5,789	3,205	1,007	264
2000	10,384	5,884	3,233	1,004	263
2001	10,486	5,964	3,258	1,002	263
2002	10,534	6,002	3,263	1,004	265
2003	10,602	6,054	3,276	1,006	266
2004	10,669	6,098	3,294	1,009	268
2005	10,719	6,135	3,304	1,011	269
2006	10,792	6,191	3,321	1,010	269
		High alternative projections			
1995	10,757	5,965	3,341	1,141	310
1996	11,018	6,108	3,430	1,163	317
1997	11,253	6,253	3,505	1,175	321
1998	11,579	6,460	3,601	1,191	327
1999	11,955	6,692	3,711	1,217	336
2000	12,373	6,951	3,828	1,247	347
2001	12,604	7,098	3,886	1,265	356
2002	12,783	7,201	3,929	1,288	364
2003	12,942	7,302	3,967	1,302	371
2004	13,109	7,395	4,013	1,321	380
2005	13,242	7,472	4,046	1,337	387
2006	13,427	7,585	4,096	1,352	394

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 24.—Full-time-equivalent enrollment in public institutions of higher education, by level of student and type of institution, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Undergraduate		Graduate	First-professional
		4-year	2-year	4-year	4-year
1981	6,781	3,575	2,573	524	110
1982	6,851	3,597	2,630	514	110
1983	6,881	3,635	2,616	520	111
1984	6,685	3,605	2,447	521	111
1985	6,668	3,601	2,428	529	110
1986	6,778	3,629	2,483	556	110
1987	6,938	3,731	2,542	557	108
1988	7,097	3,827	2,592	571	107
1989	7,372	3,921	2,752	587	112
1990	7,558	4,015	2,819	615	109
1991	7,863	4,046	3,068	640	109
1992	7,912	4,037	3,114	652	109
1993	7,812	3,996	3,046	658	112
1994*	7,679	3,927	2,962	672	117
		Middle alternative projections			
1995	7,761	3,967	2,999	677	118
1996	7,890	4,031	3,053	686	120
1997	8,027	4,109	3,104	692	122
1998	8,230	4,223	3,180	702	125
1999	8,456	4,346	3,260	720	129
2000	8,638	4,457	3,321	729	131
2001	8,756	4,535	3,359	730	132
2002	8,843	4,595	3,380	735	133
2003	8,936	4,657	3,407	738	134
2004	9,035	4,716	3,440	743	135
2005	9,132	4,778	3,471	746	136
2006	9,243	4,849	3,507	750	137
		Low alternative projections			
1995	7,480	3,824	2,899	647	111
1996	7,499	3,836	2,913	641	109
1997	7,553	3,873	2,934	638	108
1998	7,662	3,945	2,974	635	108
1999	7,758	4,010	3,006	634	107
2000	7,848	4,076	3,032	632	107
2001	7,924	4,131	3,054	631	107
2002	7,957	4,158	3,059	632	108
2003	8,007	4,194	3,071	633	108
2004	8,056	4,221	3,087	635	109
2005	8,093	4,250	3,097	636	110
2006	8,147	4,289	3,113	636	110
		High alternative projections			
1995	8,112	4,133	3,134	718	127
1996	8,310	4,231	3,217	732	130
1997	8,488	4,331	3,286	740	131
1998	8,733	4,474	3,375	750	134
1999	9,015	4,634	3,477	766	137
2000	9,325	4,813	3,585	786	142
2001	9,496	4,915	3,638	797	146
2002	9,626	4,987	3,679	811	149
2003	9,742	5,057	3,714	820	152
2004	9,865	5,122	3,757	832	156
2005	9,962	5,174	3,787	842	159
2006	10,100	5,253	3,834	852	162

*Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Table 25.—Full-time-equivalent enrollment in private institutions of higher education, by level of student and type of institution, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total	Undergraduate		Graduate	First-professional
		4-year	2-year	4-year	4-year
1981	2,233	1,612	192	277	152
1982	2,241	1,596	213	276	156
1983	2,285	1,619	226	285	155
1984	2,267	1,610	212	293	152
1985	2,276	1,603	221	300	151
1986	2,286	1,613	221	303	149
1987	2,292	1,632	201	311	148
1988	2,370	1,690	209	321	149
1989	2,409	1,707	216	335	153
1990	2,426	1,729	197	348	152
1991	2,498	1,758	212	370	158
1992	2,524	1,785	194	384	161
1993	2,539	1,789	184	399	167
1994 *	2,501	1,740	195	396	170
		Middle alternative projections			
1995	2,525	1,758	197	398	171
1996	2,566	1,786	202	404	174
1997	2,611	1,821	206	407	177
1998	2,679	1,872	212	413	180
1999	2,757	1,927	219	424	187
2000	2,819	1,977	224	429	190
2001	2,858	2,012	227	430	190
2002	2,891	2,038	228	432	192
2003	2,924	2,066	230	434	193
2004	2,958	2,093	233	437	195
2005	2,991	2,120	236	439	196
2006	3,029	2,152	238	441	198
		Low alternative projections			
1995	2,426	1,695	190	381	161
1996	2,427	1,700	191	377	159
1997	2,443	1,717	193	376	158
1998	2,476	1,749	196	374	157
1999	2,507	1,778	199	373	156
2000	2,537	1,808	201	372	156
2001	2,562	1,832	203	371	156
2002	2,577	1,844	204	372	157
2003	2,595	1,860	205	373	157
2004	2,612	1,874	206	374	159
2005	2,626	1,885	207	374	159
2006	2,644	1,902	209	374	159
		High alternative projections			
1995	2,645	1,832	207	423	184
1996	2,708	1,876	213	431	188
1997	2,765	1,921	219	435	190
1998	2,846	1,986	226	441	193
1999	2,941	2,058	234	451	198
2000	3,047	2,138	243	462	205
2001	3,109	2,183	247	468	210
2002	3,156	2,214	250	477	215
2003	3,200	2,245	253	482	219
2004	3,244	2,274	257	489	224
2005	3,280	2,297	259	495	228
2006	3,328	2,332	263	501	232

* Projected.

NOTE: Projections are based on data through 1993. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fall Enrollment in Colleges and Universities surveys and Integrated Postsecondary Education Data System (IPEDS) surveys. (This table was prepared November 1995.)

Chapter 3

High School Graduates

The number of high school graduates is projected to increase over the projection period. This increase in the number of high school graduates reflects the overall change in the 18-year-old population during the same period (figure 29). Increases in the number of graduates are expected for both public and private schools.

The tabulations below provide the following information about trends in the number of high school graduates: (1) the average annual rate of change (in percent) for 1980–81 to 1993–94 and the projected growth rate for 1993–94 to 2005–2006 and (2) the rates of change for 1980–81 to 1987–88 and 1987–88 to 1993–94 and the projected growth rates for 1993–94 to 1999–2000 and 1999–2000 to 2005–2006.

Average annual rate of change (in percent)

	1980–81 to 1993–94	Projected: 1993–94 to 2005–2006
Total	-1.4	1.6
Public	-1.5	1.6
Private	-1.0	1.6

Average annual rate of change (in percent)

	1980–81 to 1987–88	1987–88 to 1993–94	Projected: 1993–94 to 1999–2000	Projected: 1999–2000 to 2005–2006
Total	-1.2	-1.7	2.3	0.8
Public	-1.2	-1.8	2.3	0.8
Private	-1.1	-0.9	2.3	0.9

Total High School Graduates

The number of high school graduates from public and private schools decreased from 3.0 million in 1980–81 to 2.6 million in 1985–86 (table 26 and figure 30). After 1985–86, this number increased to 2.8 million in 1987–88. Then, it decreased to around 2.5 million in 1993–94, a decrease of 17 percent from 1980–81, or an average annual rate of decline of 1.4 percent. Over the projection period, the total number of high school graduates is expected to remain around 2.5 million in 1994–95. Thereafter, it is projected to rise to 3.0 million by 2005–2006, an increase of 21 percent from 1993–94, or an average annual growth rate of 1.6 percent. During the projection period, the growth rate will be higher in the first half of the projection period (1993–94 to 1999–2000) than the growth rate in the second half (1999–2000 to 2005–2006), 2.3 percent per year versus 0.8 percent per year.

High School Graduates, by Control of Institution

The number of graduates of public high schools decreased from 2.7 million in 1980–81 to 2.4 million in 1985–86 (figure 31). Then, it increased to 2.5 million in 1987–88 before declining to about 2.2 million in 1993–94, a decrease of 18 percent from 1980–81, or an average annual rate of decline of 1.5 percent. Over the projection period, public high school graduates are projected to increase to 2.7 million by 2005–2006, an increase of 21 percent from 1993–94, or an average annual growth rate of 1.6 percent. During the projection period, the growth rate will be higher in the first half of the projection period (1993–94 to 1999–2000) than the growth rate in the second half (1999–2000 to 2005–2006), 2.3 percent per year versus 0.8 percent per year (figure 32).

The number of graduates of private high schools is projected to increase from an estimated 258,000 in 1993–94 to 312,000 by 2005–2006, an increase of 21 percent, or an average annual growth rate of 1.6 percent. During the projection period, the growth rate will be higher in the first half of the projection period (1993–94 to 1999–2000) than the growth rate in the second half (1999–2000 to 2005–2006), 2.3 percent per year versus 0.9 percent per year.

Figure 29
18-year-old population, with projections: 1981 to 2006

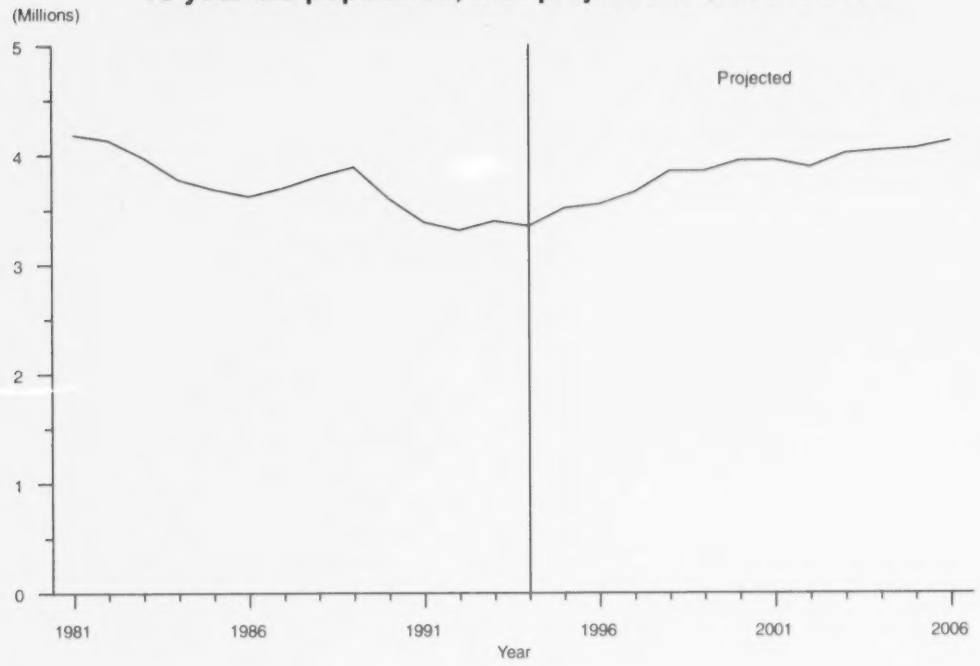

Figure 30
High school graduates, with projections: 1980-81 to 2005-2006

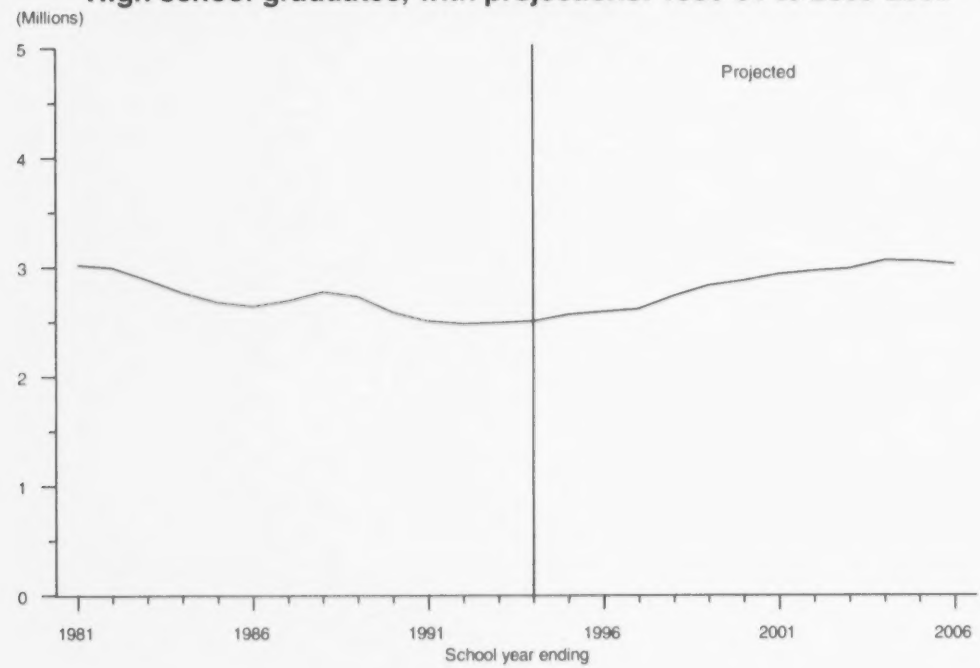

Figure 31
High school graduates, by control of institution, with projections: 1980-81 to 2005-2006

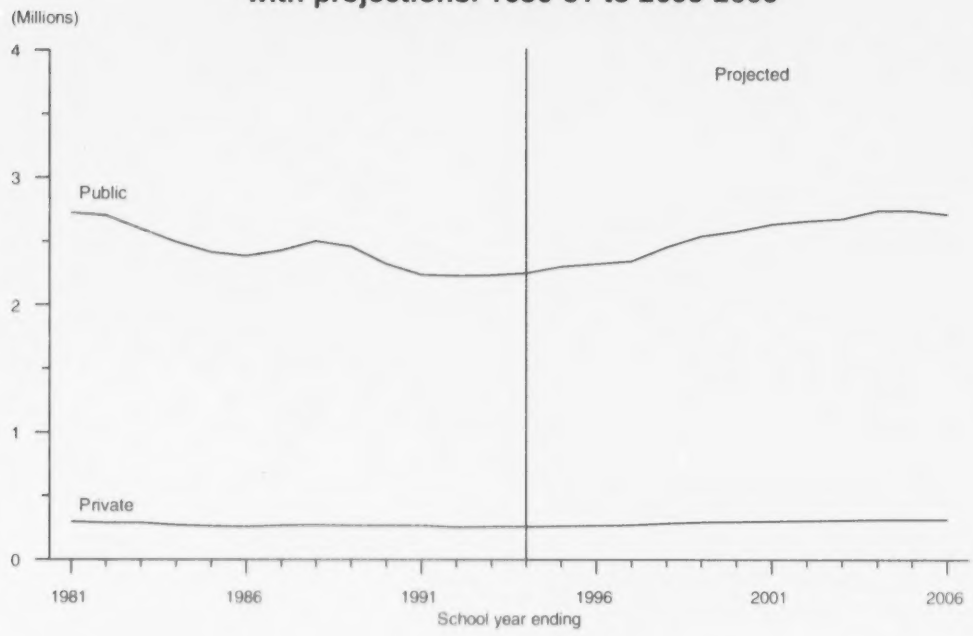

Figure 32
Average annual rates of change for high school graduates

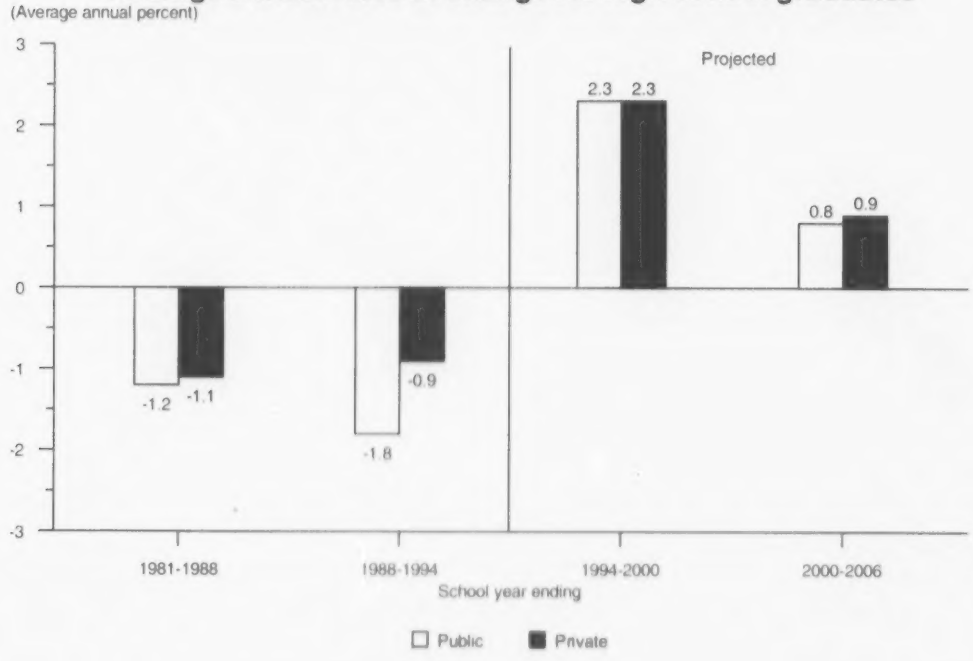

Table 26.—High school graduates, by control of institution, with projections: 50 States and D.C., 1980–81 to 2005–2006

(In thousands)

Year ending	Total	Public	Private
1981	3,020	2,725	295
1982	2,995	2,705	290
1983	2,888	2,598	290
1984	2,767	2,495	272
1985	2,677	2,414	263
1986	2,643	2,383	260
1987	2,694	2,429	265
1988	2,773	2,500	273
1989	2,727	2,459	268
1990	2,586	2,320	266
1991	2,503	2,235	268
1992	2,482	2,226	256
1993	2,490	2,233	[1]257
1994[1]	2,505	2,247	258
		Projected	
1995	2,564	2,300	264
1996	2,588	2,321	267
1997	2,612	2,343	269
1998	2,734	2,452	282
1999	2,828	2,536	292
2000	2,873	2,577	296
2001	2,933	2,631	302
2002	2,961	2,655	305
2003	2,981	2,673	307
2004	3,054	2,739	315
2005	3,051	2,736	315
2006	3,022	2,710	312

[1] Projected.

NOTE: Prior to 1989–90, numbers for private high school graduates were estimated by NCES. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Schools*; Common Core of Data surveys; "Private Elementary and Secondary Education, 1983: Enrollment, Teachers, and Schools," *NCES Bulletin*, December 1984; 1985 Private School Survey; "Key Statistics for Private Elementary and Secondary Education: School Year 1988–89," *Early Estimates*; "Key Statistics for Private Elementary and Secondary Education: School Year 1990–91," *Early Estimates*; Public and Private Elementary and Secondary Education Statistics: School Year 1991–92," *Early Estimates*; and "Public and Private Elementary and Secondary Education Statistics: School Year 1992–93," *Early Estimates*. (This table was prepared September 1995.)

Chapter 4

Earned Degrees Conferred

The historical growth in enrollment of women in institutions of higher education led to an increase in the number of earned degrees conferred. Between 1980–81 and 1993–94, the number of degrees awarded to women rose at all levels. In 1993–94, women earned the majority of associate, bachelor's, and master's degrees, and nearly two-fifths of doctor's and first-professional degrees. Over the projection period, the number of degrees awarded to women will continue to rise at most levels. With the exception of doctor's degrees, the number of degrees awarded to men will increase over the projection period.

Three alternative projections of earned degrees by level and sex were developed. In general, the number of degrees was related to college-age populations and higher education enrollment by level enrolled and attendance status.

Associate Degrees

Between 1980–81 and 1982–83, the number of associate degrees increased from 416,000 to 456,000. Thereafter, it decreased to 435,000 in 1987–88. Since then, it increased to an estimated 531,000 in 1993–94 (table 27 and figure 33). Under the middle alternative, this number is expected to increase to 584,000 by 2005–2006, an increase of 10 percent from 1993–94. Under the low alternative, the number of associate degrees is projected to increase to 536,000 by 2005–2006. Under the high alternative, associate degrees are projected to increase to 635,000 by 2005–2006. The number of associate degrees awarded to men increased from 189,000 in 1980–81 to 207,000 in 1982–83 and then decreased to 186,000 in 1988–89, before rising to an estimated 217,000 in 1993–94 (figure 34). Under the middle alternative, this number is projected to decrease to 208,000 in 1996–97 and then increase to 224,000 by 2005–2006, an increase of 3 percent from 1993–94. Under the low alternative, the number of associate degrees awarded to men is projected to decrease to 210,000 by 2005–2006. Under the high alternative, associate degrees awarded to men are projected to increase to 232,000 by 2005–2006. The number of associate degrees awarded to women increased from 228,000 in 1980–81 to 314,000 in 1993–94, an increase of 38 percent. Under the middle alternative, this number is projected to increase to 360,000 by 2005–2006, an increase of 15 percent from 1993–94. Under the low alternative, the number of associate degrees awarded to women is projected to increase to 326,000 by 2005–2006. Under the high alternative, associate degrees awarded to women are projected to increase to 403,000 by 2005–2006.

Bachelor's Degrees

The number of bachelor's degrees increased from 935,000 in 1980–81 to an estimated 1,182,000 in 1993–94, an increase of 26 percent (table 28 and figure 35). Under the middle alternative, this number is expected to rise to 1,195,000 in 1995–96, decrease slightly to 1,173,000 in 1997–98, and then increase to 1,316,000 by 2005–2006, an increase of 11 percent from 1993–94. Under the low alternative, the number of bachelor's degrees is projected to increase to 1,188,00 by 2005–2006. Under the high alternative, bachelor's degrees are projected to increase to 1,438,000 by 2005–2006. The number of bachelor's degrees awarded to men increased from 470,000 in 1980–81 to 486,000 in 1985–86 and declined for two more years, before rising to an estimated 535,000 in 1993–94 (figure 36). Under the middle alternative, this number is expected to increase to 591,000 by 2005–2006, an increase of 10 percent from 1993–94. Under the low alternative, the number of bachelor's degrees awarded to men is projected to decrease to 531,00 by 2005–2006. Under the high alternative, bachelor's degrees awarded to men are projected to increase to 616,000 by 2005–2006. The number of bachelor's degrees awarded to women increased from 465,000 in 1980–81 to an estimated 647,000 in 1993–94, an increase of 39 percent. Under the middle alternative, this number is expected to increase to 725,000 by 2005–2006, an increase of 12 percent from 1993–94. Under the low alternative, the number of bachelor's degrees awarded to women is projected to increase to 657,00 by 2005–2006. Under the high alternative, bachelor's degrees awarded to women are projected to increase to 821,000 by 2005–2006.

Master's Degrees

The number of master's degrees decreased from 296,000 in 1980–81 to 284,000 in 1983–84, before rising to an estimated 391,000 in 1993–94, an increase of 38 percent from 1983–84 (table 29 and figure 37). Under the middle alternative, this number is expected to increase to 462,000 by 2005–2006. Under the low alternative, the number of master's degrees is projected to increase to 411,00 by 2005–2006. Under the high alternative, bachelor's degrees are projected to increase to 490,000 by 2005–2006. The number of master's degrees awarded to men decreased from 147,000 in 1980–81 to 141,000 in 1986–87. Then, it increased to an estimated 186,000 in 1993–94 (figure

38). Under the middle alternative, this number is projected to increase to 212,000 by 2005–2006. Under the low alternative, the number of master's degrees awarded to men is projected to decrease to 171,00 by 2005–2006. Under the high alternative, master's degrees awarded to men are projected to increase to 230,000 by 2005–2006. The number of master's degrees awarded to women decreased from 149,000 in 1980–81 to 141,000 in 1983–84. Since then, it increased to an estimated 205,000 in 1993–94. Under the middle alternative, this number is expected to increase to 250,000 by 2005–2006. Under the low alternative, the number of master's degrees awarded to women is projected to increase to 240,000 by 2005–2006. Under the high alternative, master's degrees awarded to women are projected to increase to 260,000 by 2005–2006.

Doctor's Degrees

The number of doctor's degrees increased from 33,000 in 1980–81 to about 41,900 in 1993–94, an increase of 27 percent (table 30 and figure 39). Under the middle alternative, this number is expected to increase to 46,200 in 2000–2001 and then decrease to 43,200 by 2005–2006. Under the low alternative, the number of doctor's degrees is projected to decrease to 35,000 by 2005–2006. Under the high alternative, doctor's degrees are projected to increase to 50,900 by 2005–2006. The number of doctor's degrees awarded to men decreased from 22,700 in 1980–81 to 21,900 in 1982–83. Then, it increased to 22,100 in 1983–84 before decreasing to 21,700 in 1984–85. Thereafter, it increased to an estimated 26,000 in 1993-94. Under the middle alternative, this number is expected to fall to 21,800 by 2005–2006, a decrease of 16 percent from 1993–94 (figure 40). Under the low alternative, the number of doctor's degrees awarded to men is projected to decrease to 13,800 by 2005–2006. Under the high alternative, doctor's degrees awarded to men are projected to increase to 29,300 by 2005–2006. The number of doctor's degrees awarded to women rose from 10,200 in 1980–81 to an estimated 15,800 in 1993–94, an increase of 54 percent. Over the projection period, this pattern is expected to continue. Under the middle alternative, the number of doctor's degrees awarded to women is projected to climb to 21,400 by 2005–2006, an increase of 35 percent from 1993–94. Under the low alternative, the number of doctor's degrees awarded to women is projected to increase to 21,200 by 2005–2006. Under the high alternative, doctor's degrees awarded to women are projected to increase to 21,600 by 2005–2006. The share of doctor's degrees awarded to women, which was 31 percent in 1980–81 and 38 percent in 1993–94, is projected to climb to 50 percent by 2005–2006.

First-Professional Degrees

The number of first-professional degrees awarded rose from 72,000 in 1980–81 to 75,100 in 1984–85. Then, it decreased to 70,700 in 1987–88. Thereafter, it increased to 76,000 in 1993–94 (table 31 and figure 41). Under the middle alternative, this number is expected to increase to 91,700 by 2005–2006. Under the low alternative, the number of first-professional degrees is projected to decrease to 75,200 by 2005–2006. Under the high alternative, first-professional degrees are projected to increase to 103,300 by 2005–2006. The number of first-professional degrees awarded to men decreased from 52,800 in 1980–81 to about 43,800 in 1990–91 (figure 42). Then, it increased to an estimated 45,400 in 1993–94. Under the middle alternative, this number is projected to increase to 55,200 by 2005–2006. Under the low alternative, the number of first-professional degrees awarded to men is projected to decrease to 44,400 by 2005–2006. Under the high alternative, first-professional degrees awarded to men are projected to increase to 62,700 by 2005–2006. The number of first-professional degrees awarded to women increased from 19,200 in 1980–81 to an estimated 30,600 in 1993–94, an increase of 60 percent. Under the middle alternative, this number is expected to increase to 36,500 by 2005–2006, an increase of 19 percent from 1993–94. Under the low alternative, the number of first-professional degrees awarded to women is projected to increase to 30,800 by 2005–2006. Under the high alternative, first-professional degrees awarded to men are projected to increase to 40,600 by 2005–2006. The women's proportion of first-professional degrees rose from 27 percent in 1980–81 to 40 percent in 1993–94. By 2005–2006, this proportion is expected to remain at 40 percent.

Figure 33
Associate degrees, with alternative projections: 1980-81 to 2005-2006

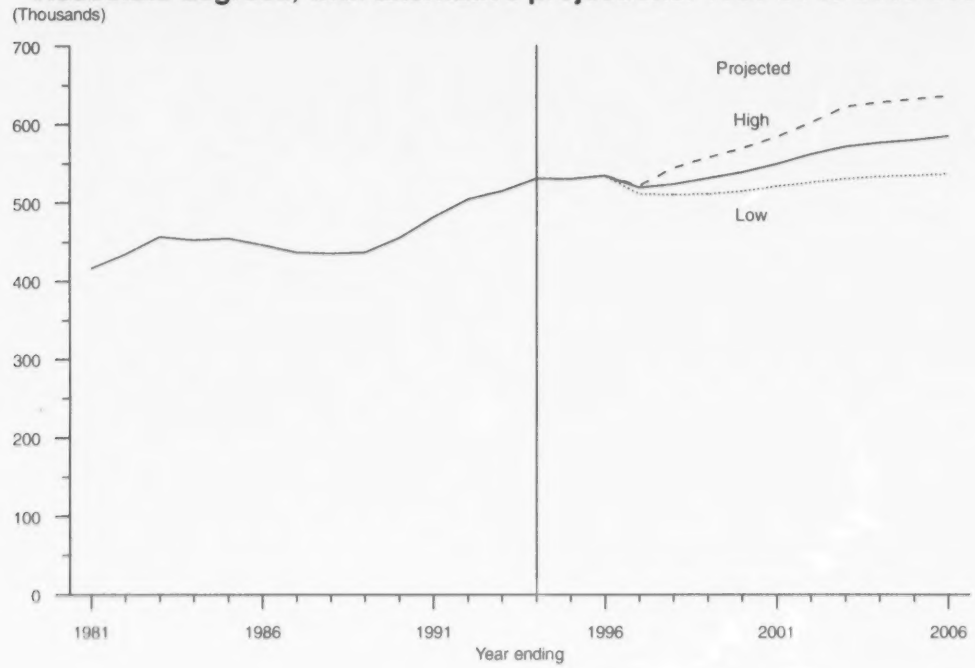

Figure 34
Associate degrees, by sex of recipient, with middle alternative projections: 1980-81 to 2005-2006

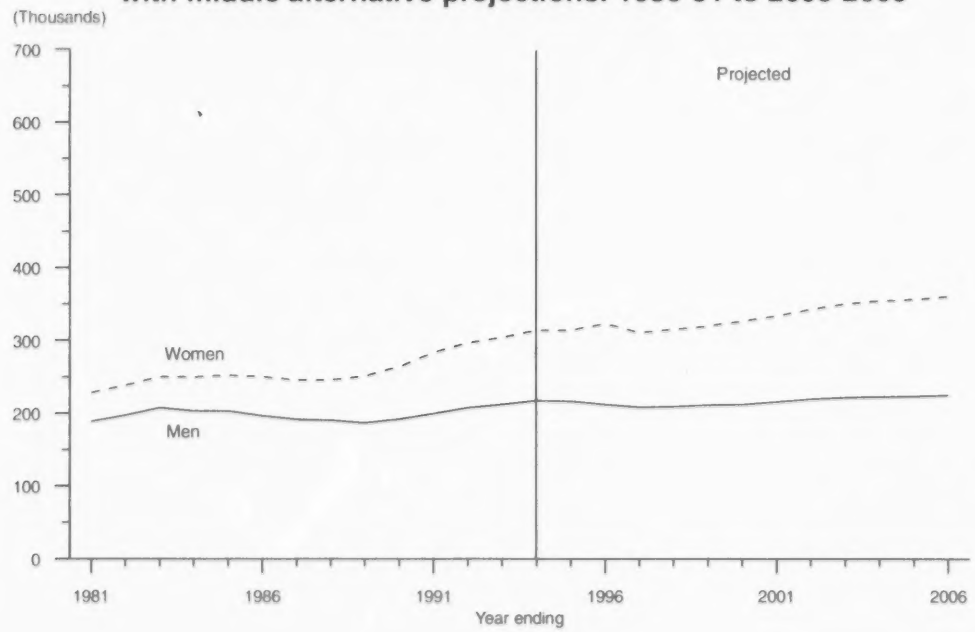

Figure 35
Bachelor's degrees, with alternative projections: 1980-81 to 2005-2006

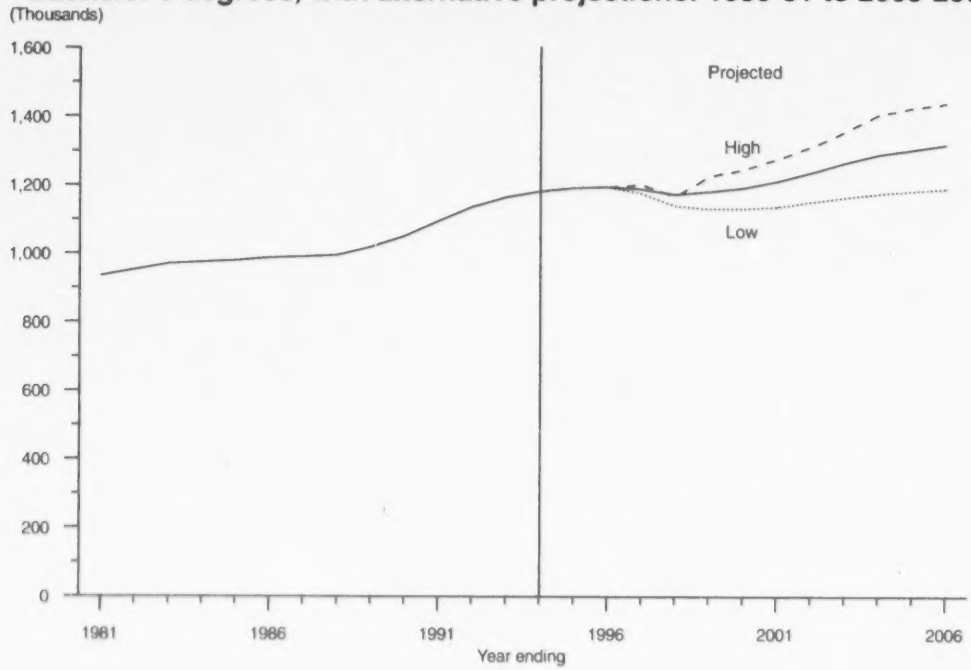

Figure 36
Bachelor's degrees, by sex of recipient, with middle alternative projections: 1980-81 to 2005-2006

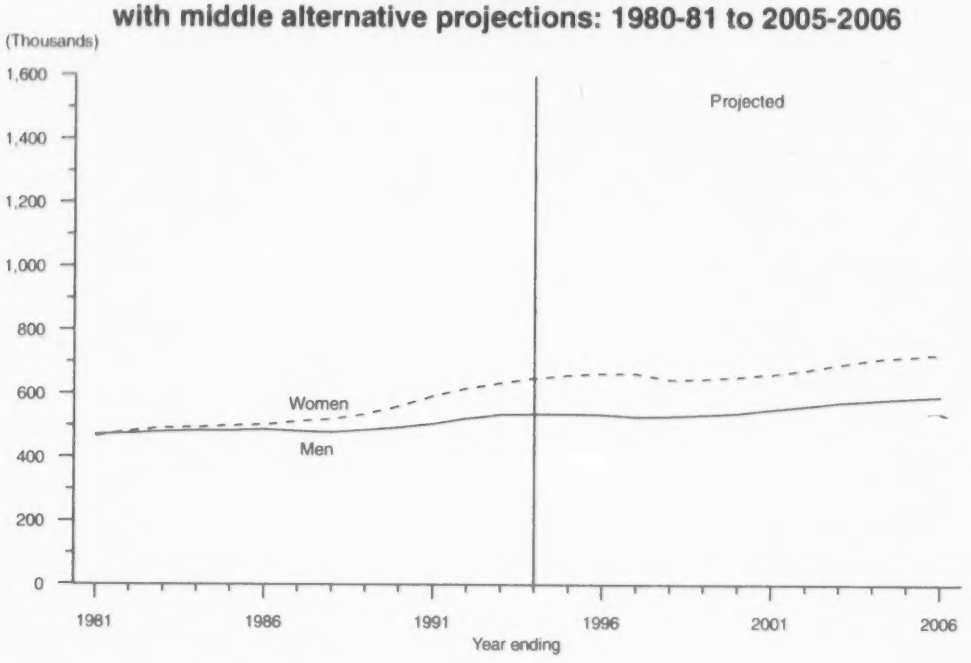

Figure 37
Master's degrees, with alternative projections: 1980-81 to 2005-2006

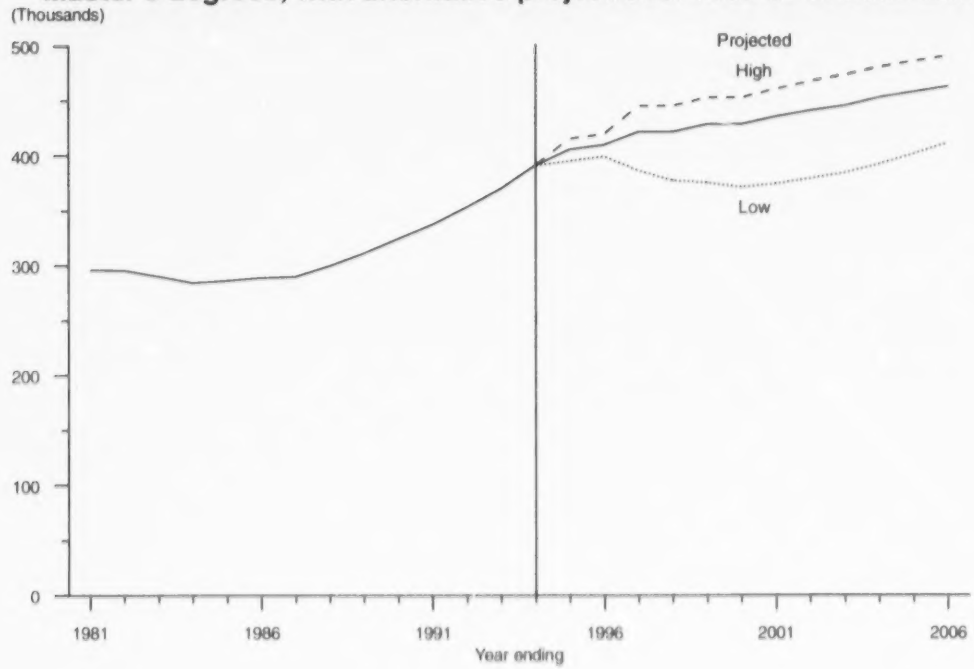

Figure 38
Master's degrees, by sex of recipient
with middle alternative projections: 1980-81 to 2005-2006

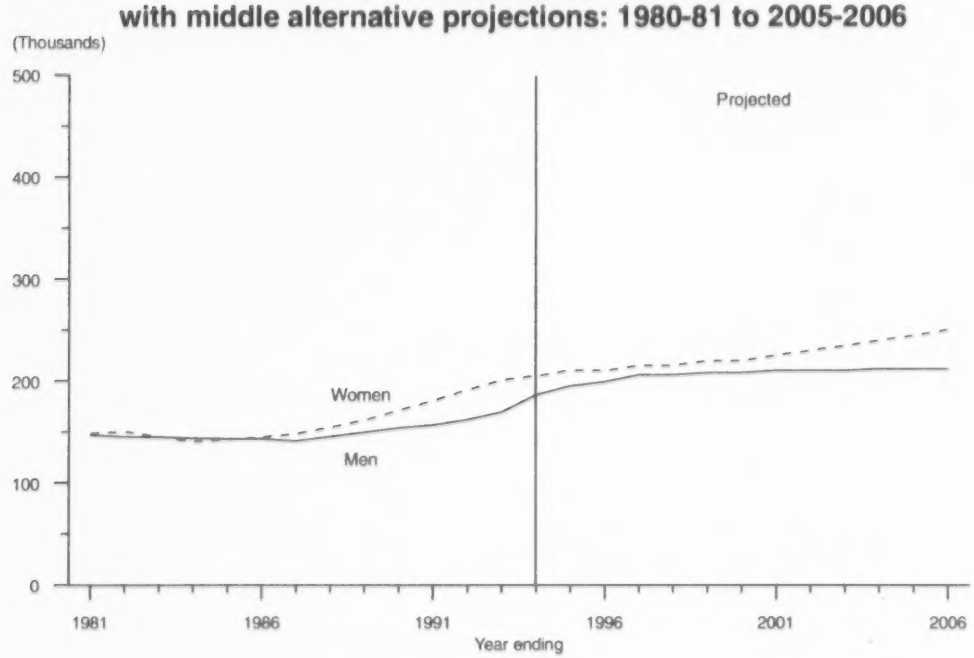

Figure 39
Doctor's degrees, with alternative projections: 1980-81 to 2005-2006

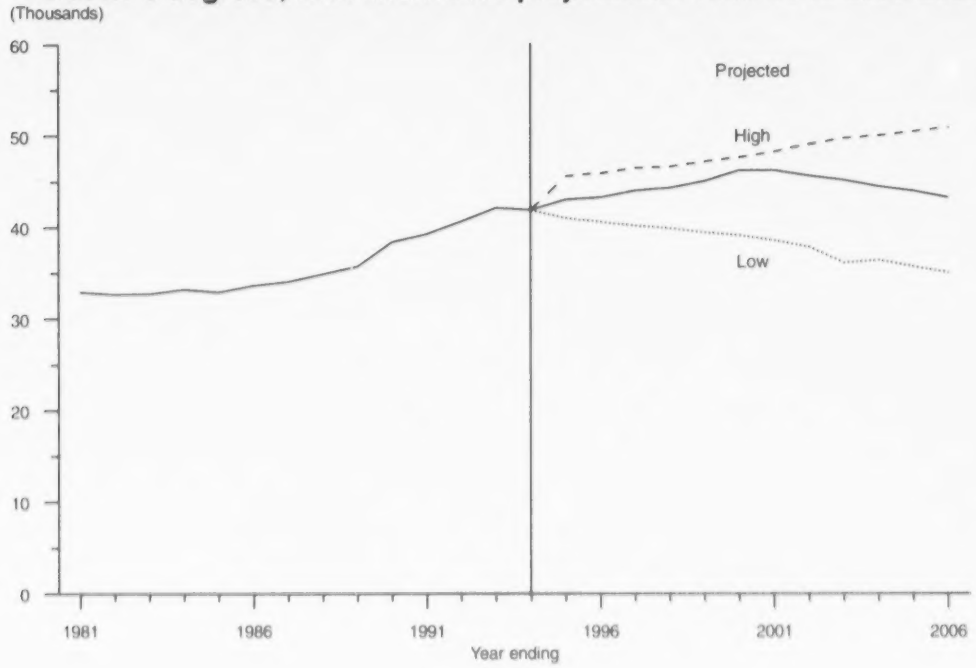

Figure 40
Doctor's degrees, by sex of recipient, with middle alternative projections: 1980-81 to 2005-2006

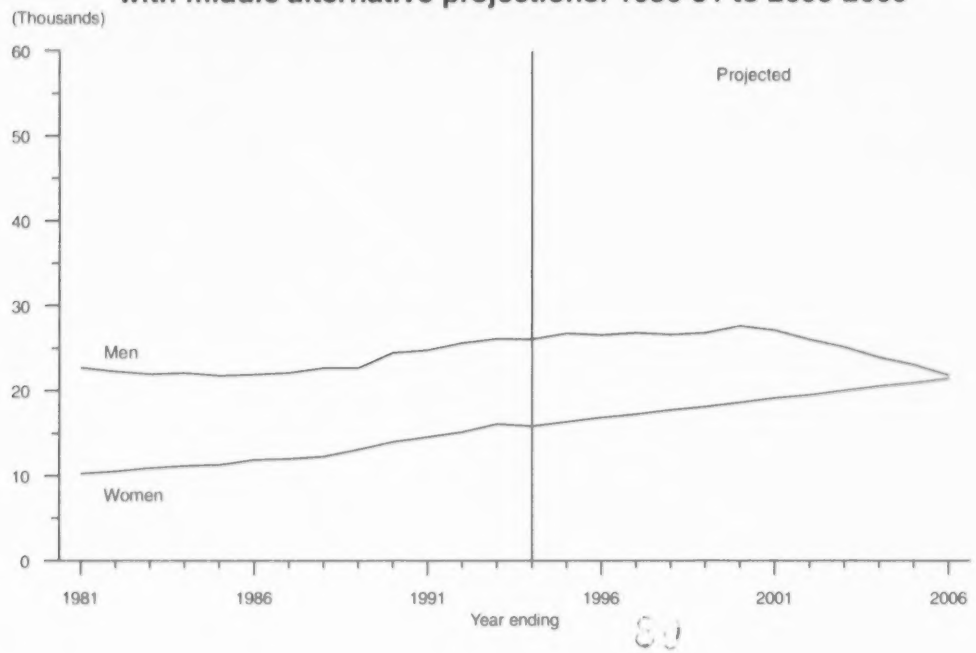

Figure 41
First-professional degrees, with alternative projections: 1980-81 to 2005-2006

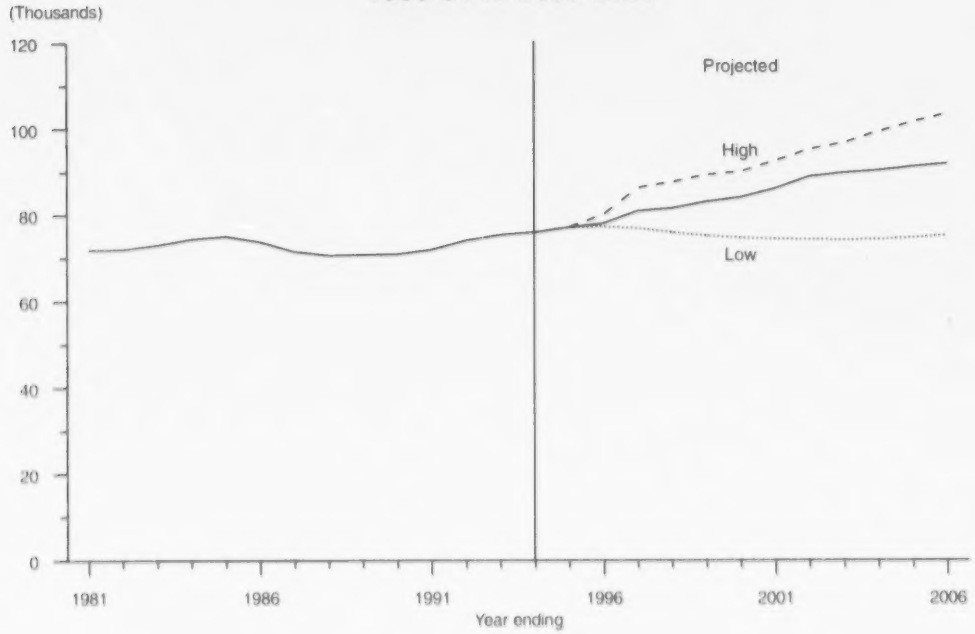

Figure 42
First-professional degrees, by sex of recipient, with middle alternative projections: 1980-81 to 2005-2006

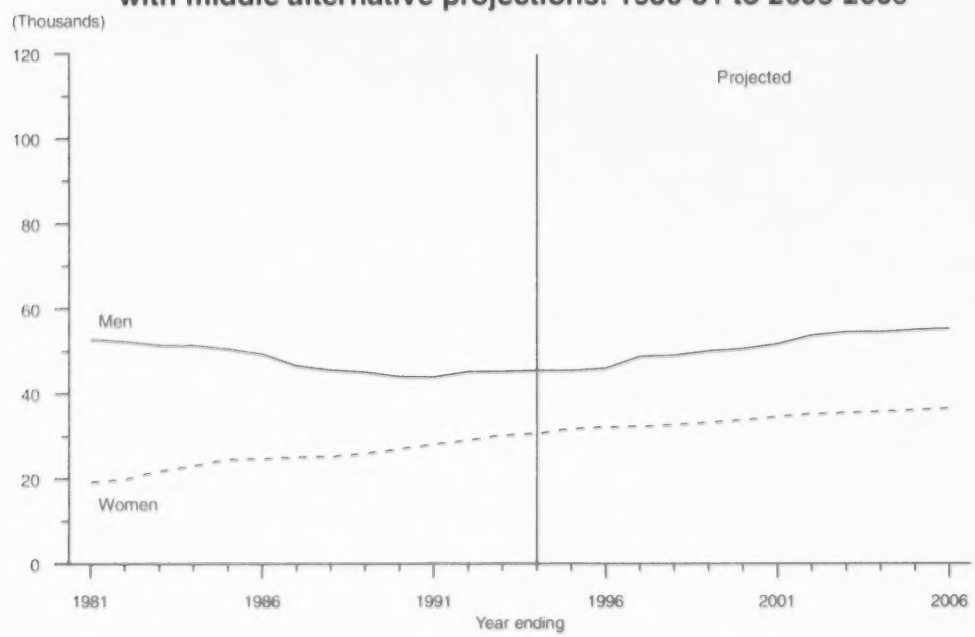

Table 27.—Associate degrees, by sex of recipient, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Total	Men	Women
1981	416,377	188,638	227,739
1982	434,515	196,939	237,576
1983	456,441	207,141	249,300
1984	452,416	202,762	249,654
1985	454,712	202,932	251,780
1986	446,047	196,166	249,881
1987	436,308	190,842	245,466
1988	435,085	190,047	245,038
1989	436,764	186,316	250,448
1990	455,102	191,195	263,907
1991	481,720	198,634	283,086
1992	504,231	207,481	296,750
1993	514,756	211,964	302,792
1994*	531,000	217,000	314,000
	Middle alternative projections		
1995	530,000	216,000	314,000
1996	534,000	212,000	323,000
1997	519,000	208,000	311,000
1998	523,000	209,000	315,000
1999	531,000	211,000	320,000
2000	538,000	212,000	326,000
2001	549,000	215,000	334,000
2002	561,000	219,000	343,000
2003	571,000	221,000	350,000
2004	576,000	222,000	354,000
2005	579,000	223,000	356,000
2006	584,000	224,000	360,000
	Low alternative projections		
1995	530,000	216,000	314,000
1996	534,000	212,000	323,000
1997	511,000	205,000	306,000
1998	510,000	204,000	305,000
1999	511,000	204,000	307,000
2000	514,000	205,000	309,000
2001	520,000	206,000	314,000
2002	525,000	208,000	318,000
2003	530,000	209,000	321,000
2004	533,000	210,000	324,000
2005	534,000	210,000	324,000
2006	536,000	210,000	326,000
	High alternative projections		
1995	530,000	216,000	314,000
1996	534,000	212,000	323,000
1997	521,000	213,000	308,000
1998	544,000	213,000	330,000
1999	557,000	215,000	342,000
2000	569,000	216,000	353,000
2001	583,000	219,000	364,000
2002	601,000	221,000	380,000
2003	621,000	224,000	397,000
2004	627,000	227,000	400,000
2005	631,000	230,000	401,000
2006	635,000	232,000	403,000

* Projected.

NOTE: Projections are based on data through 1992–93. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Degrees and Other Formal Awards Conferred" survey and Integrated Postsecondary Education Data System (IPEDS), "Completions" survey. (This table was prepared November 1995.)

Table 28.—Bachelor's degrees, by sex of recipient, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Total	Men	Women
1981	935,140	469,883	465,257
1982	952,998	473,364	479,634
1983	969,510	479,140	490,370
1984	974,309	482,319	491,990
1985	979,477	482,528	496,949
1986	987,823	485,923	501,900
1987	991,264	480,782	510,482
1988	994,829	477,203	517,626
1989	1,018,755	483,346	535,409
1990	1,051,344	491,696	559,648
1991	1,094,538	504,045	590,493
1992	1,136,553	520,811	615,742
1993	1,165,178	532,881	632,297
1994[1]	1,182,000	535,000	647,000
		Middle alternative projections	
1995	1,192,000	535,000	657,000
1996	1,195,000	533,000	663,000
1997	1,188,000	526,000	663,000
1998	1,173,000	529,000	644,000
1999	1,180,000	534,000	646,000
2000	1,191,000	539,000	652,000
2001	1,211,000	550,000	661,000
2002	1,237,000	561,000	675,000
2003	1,264,000	572,000	692,000
2004	1,288,000	580,000	708,000
2005	1,302,000	585,000	717,000
2006	1,316,000	591,000	725,000
		Low alternative projections	
1995	1,192,000	535,000	657,000
1996	1,195,000	533,000	663,000
1997	1,176,000	513,000	663,000
1998	1,140,000	510,000	630,000
1999	1,132,000	507,000	625,000
2000	1,131,000	507,000	623,000
2001	1,137,000	512,000	625,000
2002	1,150,000	516,000	633,000
2003	1,163,000	522,000	641,000
2004	1,175,000	526,000	649,000
2005	1,183,000	528,000	655,000
2006	1,188,000	531,000	657,000
		High alternative projections	
1995	1,192,000	535,000	657,000
1996	1,195,000	533,000	663,000
1997	1,202,000	539,000	663,000
1998	1,167,000	542,000	626,000
1999	1,225,000	545,000	680,000
2000	1,246,000	548,000	698,000
2001	1,275,000	558,000	718,000
2002	1,310,000	568,000	742,000
2003	1,355,000	581,000	774,000
2004	1,404,000	595,000	809,000
2005	1,424,000	606,000	818,000
2006	1,438,000	616,000	821,000

[1] Projected.

NOTE: Projections are based on data through 1992–93. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Degrees and Other Formal Awards Conferred" survey and Integrated Postsecondary Education Data System (IPEDS), "Completions" survey. (This table was prepared November 1995.)

Table 29.—Master's degrees, by sex of recipient, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Total	Men	Women
1981	295,739	147,043	148,696
1982	295,546	145,532	150,014
1983	289,921	144,697	145,224
1984	284,263	143,595	140,668
1985	286,251	143,390	142,861
1986	288,567	143,508	145,059
1987	289,349	141,269	148,080
1988	299,317	145,163	154,154
1989	310,621	149,354	161,267
1990	324,301	153,653	170,648
1991	337,168	156,482	180,686
1992	352,838	161,842	190,996
1993	369,585	169,258	200,327
1994*	391,000	186,000	205,000
		Middle alternative projections	
1995	405,000	195,000	210,000
1996	409,000	199,000	210,000
1997	421,000	206,000	215,000
1998	421,000	206,000	215,000
1999	428,000	208,000	220,000
2000	428,000	208,000	220,000
2001	435,000	210,000	225,000
2002	440,000	210,000	230,000
2003	445,000	210,000	235,000
2004	452,000	212,000	240,000
2005	457,000	212,000	245,000
2006	462,000	212,000	250,000
		Low alternative projections	
1995	395,000	195,000	200,000
1996	399,000	199,000	200,000
1997	386,000	181,000	205,000
1998	377,000	172,000	205,000
1999	375,000	165,000	210,000
2000	371,000	161,000	210,000
2001	374,000	159,000	215,000
2002	379,000	159,000	220,000
2003	384,000	159,000	225,000
2004	392,000	162,000	230,000
2005	401,000	166,000	235,000
2006	411,000	171,000	240,000
		High alternative projections	
1995	415,000	195,000	220,000
1996	419,000	199,000	220,000
1997	445,000	220,000	225,000
1998	445,000	220,000	225,000
1999	452,000	222,000	230,000
2000	452,000	222,000	230,000
2001	460,000	225,000	235,000
2002	467,000	227,000	240,000
2003	473,000	228,000	245,000
2004	480,000	230,000	250,000
2005	485,000	230,000	255,000
2006	490,000	230,000	260,000

*Projected.

NOTE: Projections are based on data through 1992–93. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Degrees and Other Formal Awards Conferred" survey and Integrated Postsecondary Education Data System (IPEDS), "Completions" survey. (This table was prepared November 1995.)

Table 30.—Doctor's degrees, by sex of recipient, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Total	Men	Women
1981	32,958	22,711	10,247
1982	32,707	22,224	10,483
1983	32,775	21,902	10,873
1984	33,209	22,064	11,145
1985	32,943	21,700	11,243
1986	33,653	21,819	11,834
1987	34,041	22,061	11,980
1988	34,870	22,615	12,255
1989	35,720	22,648	13,072
1990	38,371	24,401	13,970
1991	39,294	24,756	14,538
1992	40,659	25,557	15,102
1993	42,132	26,073	16,059
1994 *	41,900	26,000	15,800
		Middle alternative projections	
1995	43,000	26,700	16,300
1996	43,300	26,500	16,800
1997	44,000	26,800	17,200
1998	44,300	26,600	17,700
1999	45,000	26,800	18,100
2000	46,200	27,600	18,600
2001	46,200	27,100	19,100
2002	45,600	26,000	19,500
2003	45,100	25,100	20,000
2004	44,400	23,900	20,500
2005	43,900	23,000	20,900
2006	43,200	21,800	21,400
		Low alternative projections	
1995	41,000	24,900	16,100
1996	40,600	24,000	16,600
1997	40,200	23,200	17,000
1998	39,900	22,400	17,500
1999	39,400	21,500	17,900
2000	39,100	20,700	18,400
2001	38,500	19,600	18,900
2002	37,800	18,500	19,300
2003	36,100	17,300	18,800
2004	36,400	16,100	20,300
2005	35,700	15,000	20,700
2006	35,000	13,800	21,200
		High alternative projections	
1995	45,600	29,100	16,500
1996	45,900	28,900	17,000
1997	46,500	29,100	17,400
1998	46,600	28,700	17,900
1999	47,100	28,800	18,300
2000	47,600	28,800	18,800
2001	48,200	28,900	19,300
2002	49,000	29,300	19,700
2003	49,700	29,500	20,200
2004	50,000	29,300	20,700
2005	50,400	29,300	21,100
2006	50,900	29,300	21,600

* Projected.

NOTE: Projections are based on data through 1992–93. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Degrees and Other Formal Awards Conferred" survey and Integrated Postsecondary Education Data System (IPEDS), "Completions" survey. (This table was prepared November 1995.)

Table 31.—First-professional degrees, by sex of recipient, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Total	Men	Women
1981	71,956	52,792	19,164
1982	72,032	52,223	19,809
1983	73,136	51,310	21,826
1984	74,407	51,334	23,073
1985	75,063	50,455	24,608
1986	73,910	49,261	24,649
1987	71,617	46,523	25,094
1988	70,735	45,484	25,251
1989	70,856	45,046	25,810
1990	70,988	43,961	27,027
1991	71,948	43,846	28,102
1992	74,146	45,071	29,075
1993	75,387	45,153	30,234
1994 *	76,000	45,400	30,600
		Middle alternative projections	
1995	77,100	45,400	31,700
1996	78,000	45,900	32,100
1997	80,900	48,700	32,200
1998	81,600	48,900	32,600
1999	83,000	49,900	33,100
2000	84,100	50,400	33,700
2001	86,100	51,600	34,500
2002	88,900	53,700	35,200
2003	89,700	54,400	35,400
2004	90,200	54,500	35,700
2005	91,100	55,000	36,100
2006	91,700	55,200	36,500
		Low alternative projections	
1995	77,100	45,400	31,700
1996	77,400	45,900	31,500
1997	77,000	46,100	30,900
1998	76,000	45,400	30,500
1999	75,200	44,800	30,400
2000	74,800	44,500	30,300
2001	74,500	44,200	30,300
2002	74,300	44,100	30,200
2003	74,200	44,000	30,200
2004	74,400	44,000	30,400
2005	74,800	44,200	30,600
2006	75,200	44,400	30,800
		High alternative projections	
1995	77,100	45,400	31,700
1996	80,000	45,900	34,100
1997	86,300	52,000	34,300
1998	87,600	52,300	35,300
1999	89,400	53,200	36,200
2000	90,000	53,300	36,700
2001	92,500	54,400	38,100
2002	95,200	55,400	39,700
2003	96,700	56,800	39,900
2004	99,200	59,000	40,100
2005	101,400	61,100	40,400
2006	103,300	62,700	40,600

* Projected.

NOTE: Projections are based on data through 1992–93. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Degrees and Other Formal Awards Conferred" survey and Integrated Postsecondary Education Data System (IPEDS), "Completions" survey. (This table was prepared November 1995.)

Chapter 5

Classroom Teachers

Between 1994 and 2006, the number of classroom teachers in elementary and secondary schools is projected to rise, primarily due to the increase in school enrollment during this period. Increases are expected in the numbers of both elementary and secondary teachers. The number of secondary teachers will increase at a faster rate than the number of elementary teachers. The numbers of public and private teachers are projected to grow.

Three alternative projections of the numbers of classroom teachers were developed to indicate a range of possible outcomes. These alternatives are based on different assumptions about the growth paths for two of the key variables in the teacher model—disposable income per capita and education revenue receipts from state sources per capita. Under the middle alternative, disposable income per capita is projected to increase by 19 percent between 1994 and 2006, while education revenue receipts from state sources per capita will rise by 18 percent during this period. The low alternative assumes that disposable income per capita and education revenue receipts from state sources per capita will increase by 12 percent and 11 percent, respectively. The high alternative assumes that disposable income per capita and education revenue receipts from state sources per capita will increase by 26 percent and 26 percent, respectively. The third variable in the teacher model, enrollment by organizational level, is the same for all three alternatives.

For classroom teachers, the following tabulations show: (1) the average annual rate of change (in percent) for 1981–94 and the three alternative projected rates of change for 1994–2006 and (2) the rates of change for 1981–88 and 1988–94 and the middle alternative projected rates of change for 1994–2000 and 2000–2006.

Average annual rate of change (in percent)

	1981–94	1994–2006		
		Low	Middle	High
Total	1.5	0.9	1.2	1.6
Elementary	1.9	0.6	1.0	1.3
Secondary	0.9	1.3	1.7	2.0
Public	1.5	0.9	1.3	1.6
Private	1.5	0.8	1.2	1.5

Average annual rate of change (in percent)
(Middle alternative projections)

	1981–88	1988–94	Projected	
			1994–2000	2000–2006
Total	1.3	1.8	1.5	1.0
Elementary	1.9	1.9	1.3	0.6
Secondary	0.4	1.5	1.9	1.5
Public	1.3	1.8	1.5	1.0
Private	1.4	1.6	1.4	0.9

Elementary and Secondary School Teachers

The number of classroom teachers in elementary and secondary schools increased from 2.44 million in 1981 to 2.96 million in 1994, an increase of 21 percent (table 32 and figure 43). Under the middle alternative, the number of classroom teachers is projected to increase to 3.43 million by the year 2006, increasing at an average annual growth rate of 1.2 percent, for a 16-percent increase over the projection period. The growth rate will be higher in the first half of the projection period (1994–2000) than in the second half (2000–2006), 1.5 percent per year versus 1.0 percent (figure 44). Under the low alternative, the number of classroom teachers is projected to increase to 3.29 million by the year 2006, increasing at an average annual growth rate of 0.9 percent. Under the high alternative, classroom teachers are projected to increase to 3.56 million by the year 2006, increasing at an average annual growth rate of 1.6 percent.

Classroom Teachers, by Organizational Level

While elementary enrollment decreased from 1981 to 1983, the number of elementary teachers rose slightly, from 1.40 million in 1981 to 1.43 million in 1983 (figure 45). Then, the number continued to increase to about 1.80 million in 1994, an increase of 28 percent from 1981. Under the middle alternative, the number of elementary teachers is projected to increase to 2.01 million by 2006, an increase of 12 percent from 1994; this increase represents an average annual growth rate of 1.0 percent per year. During the projection period, the growth rate in the 1994–2000 period will be 1.3 percent, while the growth rate

in the 2000–2006 period will be 0.6 percent (figure 46). Under the low alternative, the number of elementary teachers is projected to increase to 1.92 million by the year 2006, increasing at an average annual growth rate of 0.6 percent. Under the high alternative, elementary teachers are projected to increase to 2.09 million by the year 2006, increasing at an average annual growth rate of 1.3 percent.

The number of secondary classroom teachers increased from 1.04 million in 1981 to about 1.17 million in 1994, an increase of 12 percent from 1981. Under the middle alternative, the number of secondary teachers is projected to increase from 1.17 million in 1994 to 1.42 million by the year 2006, resulting in an increase of 22 percent. This increase will represent an average annual growth rate of 1.7 percent over the projection period. During the projection period, the growth rate in the 1994–2000 period will be 1.9 percent, while the growth rate in the 2000–2006 period will be 1.5 percent. Under the low alternative, the number of secondary teachers is projected to increase to 1.37 million by the year 2006, increasing at an average annual growth rate of 1.3 percent. Under the high alternative, secondary teachers are projected to increase to 1.47 million by the year 2006, increasing at an average annual growth rate of 2.0 percent.

Classroom Teachers, by Control of School

The number of classroom teachers in public elementary and secondary schools increased from 2.13 million in 1981 to about 2.58 million in 1994, an increase of 21 percent from 1981 (figure 47). Under the middle alternative, the number of public school teachers is projected to increase to 3.00 million by the year 2006, resulting in an increase of 16 percent from 1994. This increase will represent an average annual growth rate of 1.3 percent. During the projection period, the growth rate in the 1994–2000 period will be 1.5 percent, while the growth rate in the 2000–2006 period will be 1.0 percent (figure 48). Under the low alternative, the number of public school teachers is projected to increase to 2.87 million by the year 2006, increasing at an average annual growth rate of 0.9 percent. Under the high alternative, public school teachers are projected to increase to 3.11 million by the year 2006, increasing at an average annual growth rate of 1.6 percent.

The number of classroom teachers in private elementary and secondary schools was an estimated 379,000 in 1994. This number is projected to increase to 435,000 by the year 2006, an increase of 15 percent from 1994. This increase will represent an average annual growth rate of 1.2 percent. During the projection period, the growth rate in the 1994–2000 period will be 1.4 percent, while the growth rate in the 2000–2006 period will be 0.9 percent. Under the low alternative, the number of private school teachers is projected to increase to 417,000 by the year 2006, increasing at an average annual growth rate of 0.8 percent. Under the high alternative, private school teachers are projected to increase to 452,000 by the year 2006, increasing at an average annual growth rate of 1.5 percent.

Pupil-Teacher Ratios

A broad relationship between the number of pupils and teachers can be described by the pupil-teacher ratio. The pupil-teacher ratios were computed based on elementary and secondary enrollment by organizational level and the number of classroom teachers by organizational level.

The pupil-teacher ratio in elementary schools decreased from 20.0 in 1981 to 18.4 in 1989. Then, the pupil-teacher ratio increased to 18.8 in 1992 and then declined to 18.4 in 1994 (table 33 and figure 49). Under the middle alternative, this ratio is projected to decline to 17.2 by the year 2006. Under the low and high alternatives, the pupil-teacher ratio in elementary schools is expected to range between 16.6 and 18.0 by the year 2006.

For public elementary schools, under the middle alternative, the pupil-teacher ratio is projected to decrease from 18.8 in 1994 to 17.6 by the year 2006 (figure 50). Under the low and high alternatives, the pupil-teacher ratio in public elementary schools is projected to range between 16.9 and 18.4 by the year 2006. For private elementary schools, under the middle alternative, the pupil-teacher ratio is projected to decrease from 16.3 in 1994 to 15.3 by the year 2006. Under the low and high alternatives, the pupil-teacher ratio in private elementary schools is expected to range between 14.7 and 16.0 by the year 2006.

For secondary schools, the pupil-teacher ratio decreased from 16.8 in 1981 to 14.3 in 1990. Next, it increased to about 14.8 in 1993. Then, it declined to 14.3 in 1994. Under the middle alternative, this ratio is projected to increase to 14.4 in 1997 and then decrease to 14.0 by 2006. Under the low and high alternatives, the pupil-teacher ratio in secondary schools is projected to range between 13.6 and 14.6 by the year 2006.

For public secondary schools, under the middle alternative, the pupil-teacher ratio is projected to decrease from 14.7 in 1994 to 14.4 by 2006. Under the low and high alternatives, the pupil-teacher ratio in public secondary schools is expected to range between 13.9 and 14.9 by the year 2006. For private secondary schools, under the middle alternative, the pupil-teacher ratio is projected to increase from 11.0 in 1994 to 11.2 by 1997. Then, it will decline gradually to 11.0 by the year 2006. Under the low and high alternatives, the pupil-teacher ratio in private secondary schools is projected to range between 10.6 and 11.5 by the year 2006.

Although private school classroom teachers represented 13 percent of total classroom teachers in 1994, private school enrollment was 11 percent of total enrollment. This indicates that private schools have more teachers for a given number of students than do public schools; that is, private school pupil-teacher ratios are smaller than public school pupil-teacher ratios.

Figure 43
Elementary and secondary classroom teachers, with alternative projections: Fall 1981 to fall 2006

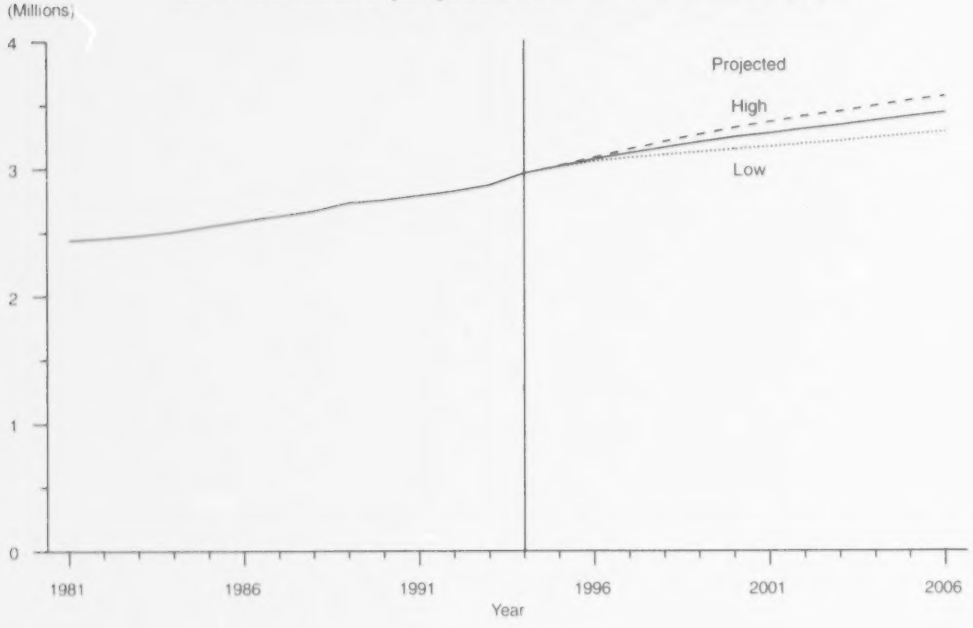

Figure 44
Average annual growth rates for classroom teachers

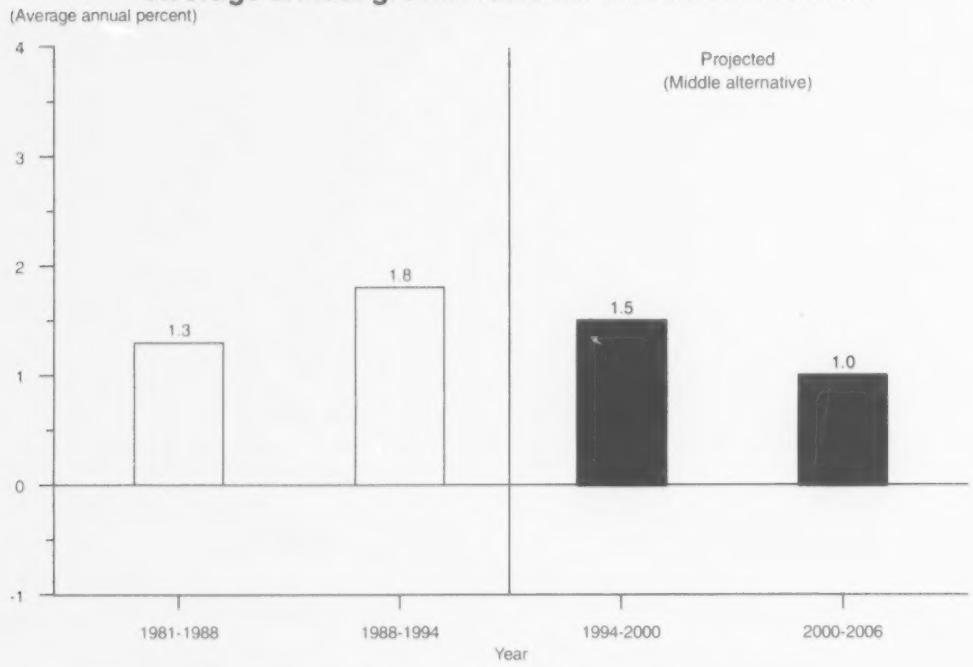

Figure 45
Elementary and secondary classroom teachers, by organizational level, with middle alternative projections: Fall 1981 to fall 2006

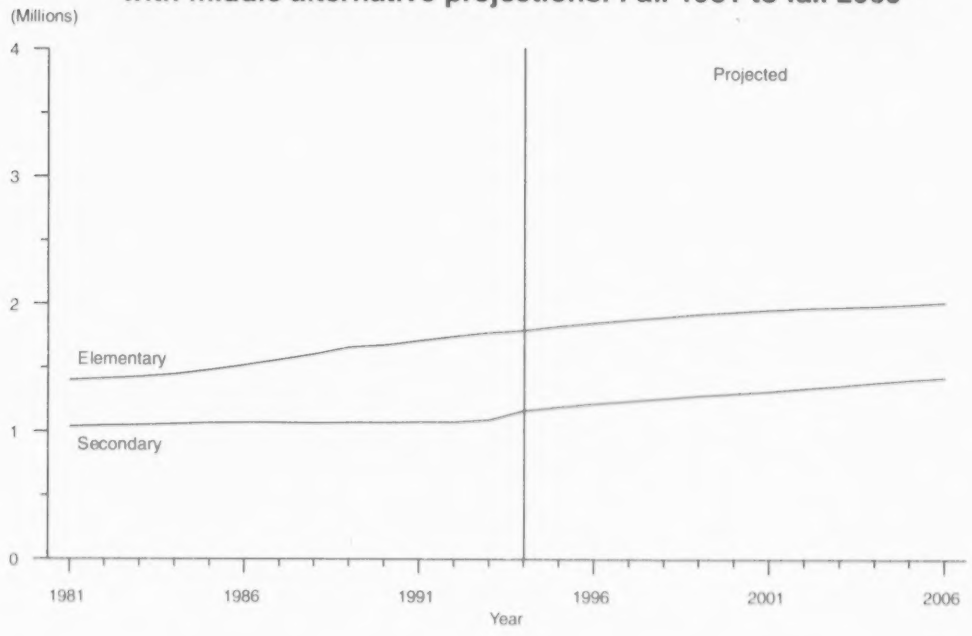

Figure 46
Average annual rates of change for classroom teachers, by organizational level

(Average annual percent)

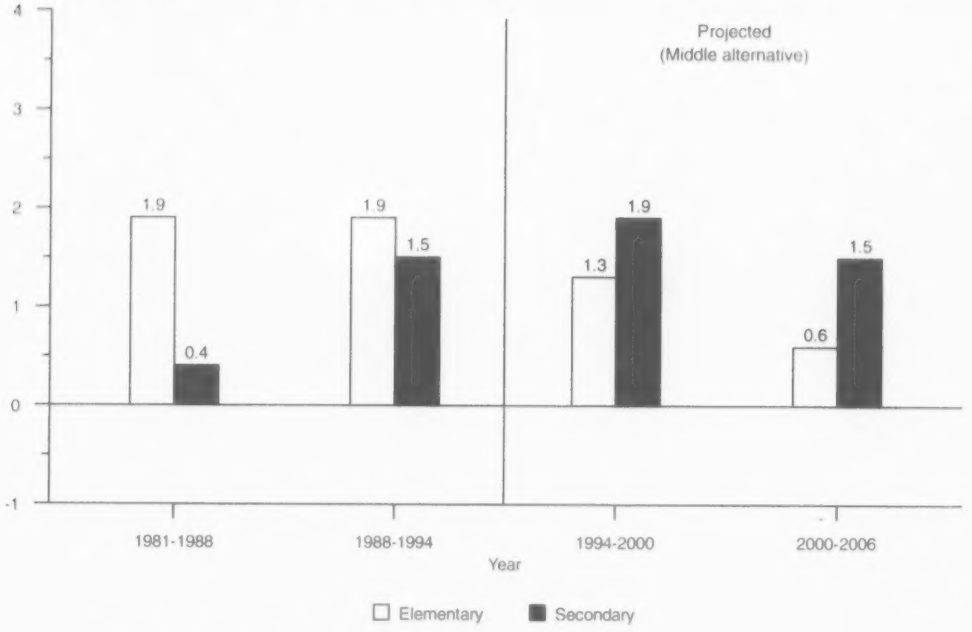

Figure 47
Elementary and secondary classroom teachers, by control of institution, with middle alternative projections: Fall 1981 to fall 2006

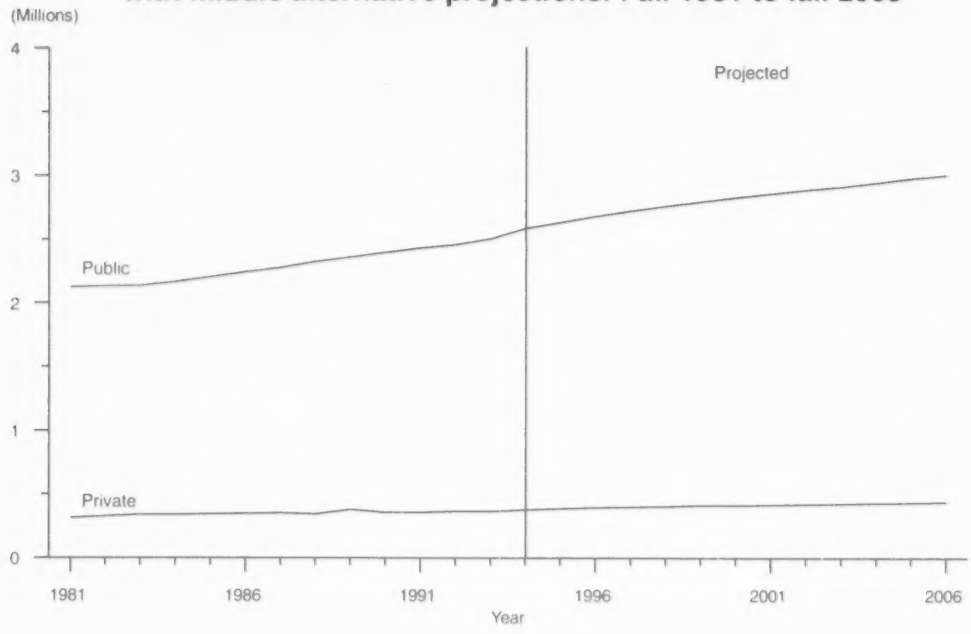

Figure 48
Average annual growth rates for classroom teachers, by control of institution

(Average annual percent)

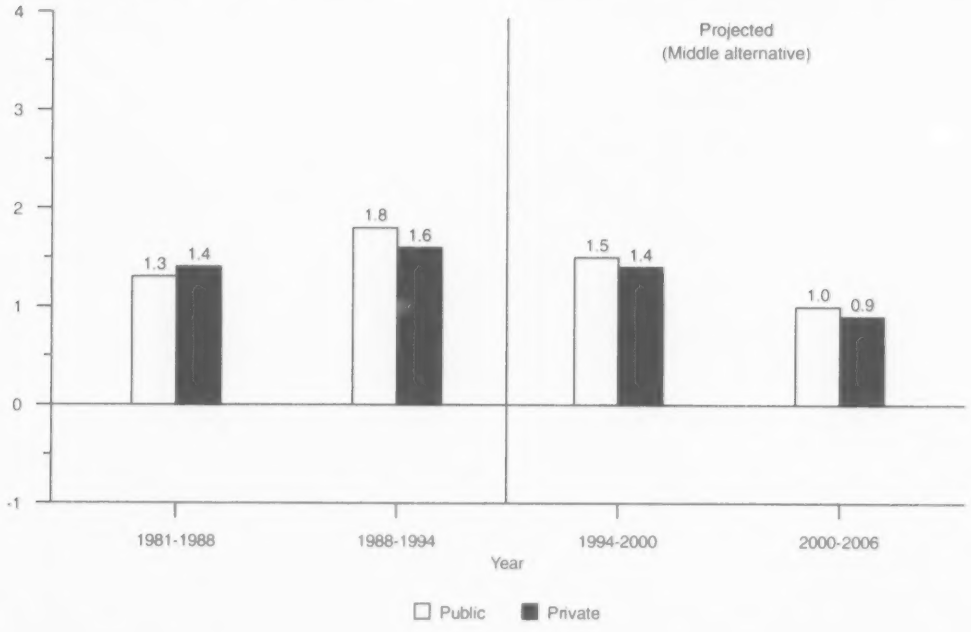

Figure 49
Pupil-teacher ratios, by organizational level, with middle alternative projections: Fall 1981 to fall 2006

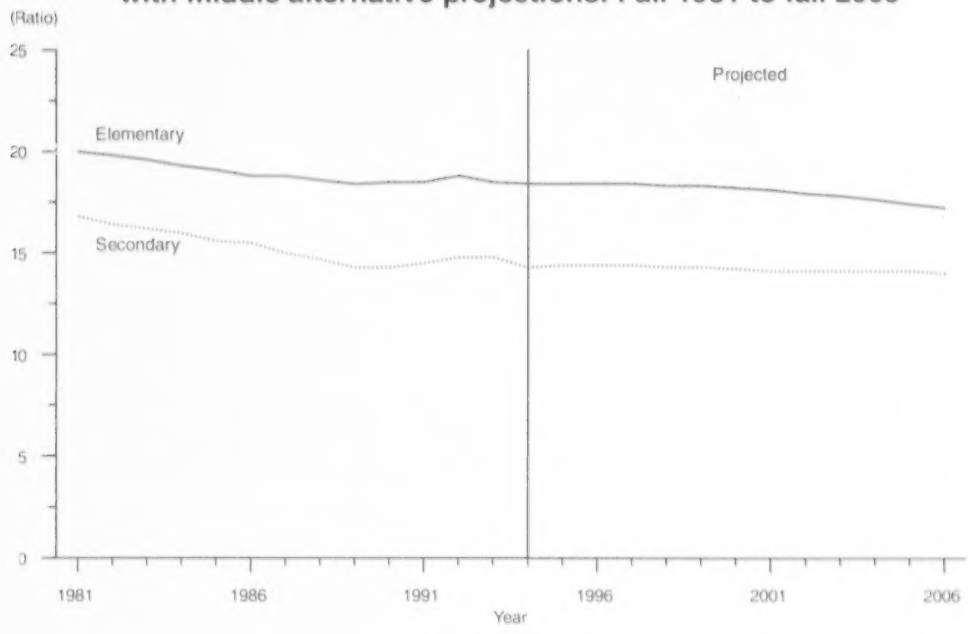

Figure 50
Pupil-teacher ratios, by organizational level and control, with middle alternative projections: Fall 1981 to fall 2006

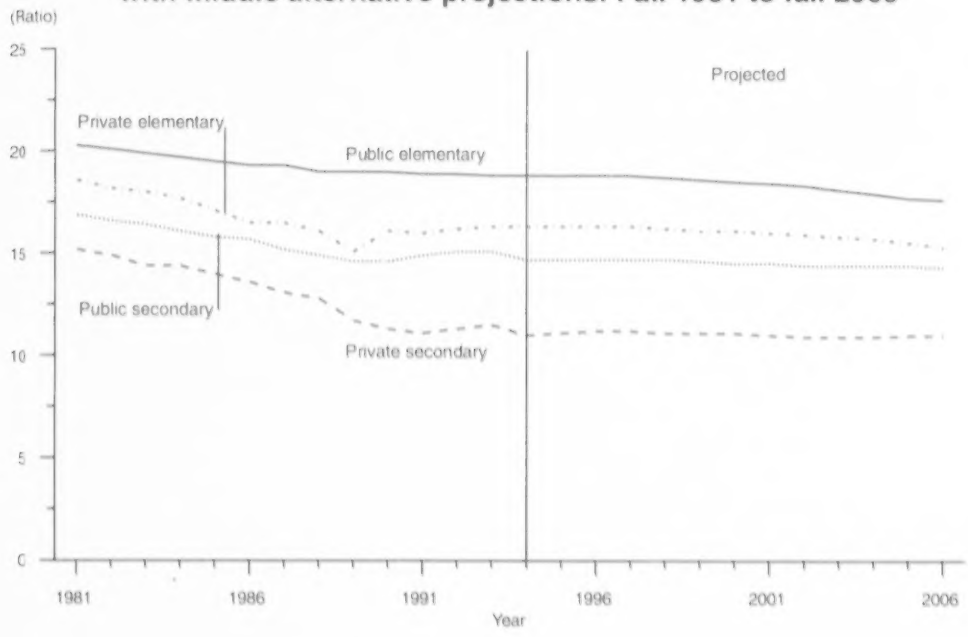

Table 32.—Classroom teachers in elementary and secondary schools, by control of institution and organizational level, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

(In thousands)

Year	Total			Public			Private		
	K–12	Elementary	Secondary	K–12	Elementary	Secondary	K–12	Elementary	Secondary
1981	2,440	1,404	1,037	2,127	1,183	945	[1]313	221	92
1982	2,458	1,413	1,045	2,133	1,182	951	[1]325	231	94
1983	2,476	1,426	1,050	2,139	1,186	953	337	240	97
1984	2,508	1,451	1,057	2,168	1,208	960	[1]340	243	97
1985	2,549	1,483	1,066	2,206	1,237	969	343	246	97
1986	2,592	1,521	1,071	2,244	1,271	973	[1]348	250	98
1987	2,632	1,564	1,068	2,279	1,307	973	[2]353	257	95
1988	2,668	1,604	1,064	2,323	1,353	970	[2]345	251	94
1989	2,734	1,662	1,072	2,357	1,387	970	[2]377	275	102
1990	2,753	1,680	1,073	2,398	1,426	972	[2]355	254	101
1991	2,787	1,713	1,074	2,432	1,459	973	[2]355	254	101
1992	2,821	1,746	1,075	2,458	1,486	972	[2]363	260	103
1993	2,871	1,778	1,093	2,505	1,516	989	[3]366	262	104
1994[3]	2,962	1,796	1,166	2,583	1,529	1,054	379	267	112
				Middle alternative projections					
1995	3,017	1,825	1,191	2,631	1,554	1,077	386	272	114
1996	3,071	1,851	1,220	2,679	1,576	1,103	392	276	117
1997	3,118	1,876	1,242	2,720	1,597	1,123	398	279	119
1998	3,161	1,899	1,262	2,758	1,616	1,142	404	283	121
1999	3,202	1,920	1,282	2,793	1,634	1,159	409	286	123
2000	3,239	1,938	1,301	2,826	1,649	1,177	413	288	125
2001	3,272	1,954	1,318	2,855	1,663	1,191	417	291	126
2002	3,304	1,965	1,338	2,883	1,673	1,210	421	293	128
2003	3,334	1,975	1,359	2,910	1,681	1,229	424	294	130
2004	3,368	1,985	1,383	2,940	1,690	1,250	428	295	132
2005	3,403	1,997	1,406	2,971	1,700	1,272	432	297	135
2006	3,431	2,009	1,422	2,996	1,710	1,286	435	299	136
				Low alternative projections					
1995	3,014	1,823	1,191	2,629	1,552	1,077	385	271	114
1996	3,057	1,842	1,215	2,666	1,568	1,099	391	274	116
1997	3,085	1,855	1,230	2,691	1,579	1,112	394	276	118
1998	3,107	1,864	1,243	2,710	1,586	1,124	396	277	119
1999	3,130	1,873	1,257	2,730	1,594	1,136	399	279	120
2000	3,152	1,881	1,271	2,750	1,601	1,149	402	280	122
2001	3,170	1,889	1,281	2,766	1,608	1,158	404	281	123
2002	3,192	1,895	1,297	2,785	1,613	1,173	406	282	124
2003	3,213	1,900	1,313	2,804	1,617	1,187	409	283	126
2004	3,239	1,905	1,333	2,827	1,622	1,206	411	284	128
2005	3,266	1,913	1,354	2,852	1,628	1,224	414	285	130
2006	3,287	1,920	1,367	2,870	1,634	1,236	417	286	131
				High alternative projections					
1995	3,020	1,828	1,192	2,634	1,556	1,078	386	272	114
1996	3,087	1,861	1,226	2,693	1,584	1,108	394	277	117
1997	3,151	1,898	1,253	2,748	1,615	1,133	402	282	120
1998	3,210	1,931	1,280	2,800	1,643	1,157	410	287	123
1999	3,266	1,962	1,304	2,849	1,670	1,179	417	292	125
2000	3,318	1,989	1,329	2,894	1,693	1,202	423	296	127
2001	3,363	2,012	1,350	2,934	1,713	1,221	429	299	129
2002	3,405	2,030	1,376	2,971	1,727	1,244	434	302	132
2003	3,443	2,044	1,399	3,005	1,740	1,265	438	304	134
2004	3,485	2,058	1,427	3,042	1,752	1,290	443	306	137
2005	3,527	2,074	1,454	3,079	1,765	1,314	448	309	139
2006	3,563	2,091	1,473	3,111	1,779	1,332	452	311	141

[1] Estimated on the basis of past data.
[2] Estimate.
[3] Projected.

NOTE: The numbers of elementary and secondary teachers reported separately by the National Education Association were prorated to the NCES totals for each year. Projections are based on data through 1992. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Schools*; Common Core of Data surveys; "Private Elementary and Secondary Education, 1983: Enrollment, Teachers, and Schools," *NCES Bulletin*, December 1984; 1985 Private School Survey; "Key Statistics for Private Elementary and Secondary Education: School Year 1988–89," *Early Estimates*; "Key Statistics for Private Elementary and Secondary Education: School Year 1990–91," *Early Estimates*; Public and Private Elementary and Secondary Education Statistics: School Year 1991–92," *Early Estimates*; and "Public and Private Elementary and Secondary Education Statistics: School Year 1992–93," *Early Estimates*. (This table was prepared October 1995.)

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Table 33.—Pupil-teacher ratios in elementary and secondary schools, by control of institution and organizational level, with alternative projections: 50 States and D.C., fall 1981 to fall 2006

Year	Total		Public		Private	
	Elementary	Secondary	Elementary	Secondary	Elementary	Secondary
1981	20.0	16.8	20.3	16.9	[1]18.6	[1]15.2
1982	19.8	16.4	20.2	16.6	[1]18.2	[1]14.9
1983	19.6	16.2	19.9	16.4	18.0	14.4
1984	19.3	16.0	19.7	16.1	[1]17.7	[1]14.4
1985	19.1	15.6	19.5	15.8	17.1	14.0
1986	18.8	15.5	19.3	15.7	[1]16.5	[1]13.6
1987	18.8	15.0	19.3	15.2	[2]16.4	[2]13.1
1988	18.6	14.7	19.0	14.9	[2]16.1	[2]12.8
1989	18.4	14.3	19.0	14.6	[2]15.1	[2]11.7
1990	18.5	14.3	19.0	14.6	[2]16.1	[2]11.3
1991	18.5	14.5	18.9	14.9	[2]16.0	[2]11.1
1992	18.8	14.8	18.9	15.1	[2]16.2	[2]11.3
1993	18.5	14.8	18.8	15.1	[3]16.3	[3]11.5
1994[3]	18.4	14.3	18.8	14.7	16.3	11.0
			Middle alternative projections			
1995	18.4	14.4	18.8	14.7	16.3	11.1
1996	18.4	14.4	18.8	14.7	16.3	11.2
1997	18.4	14.4	18.8	14.7	16.3	11.2
1998	18.3	14.3	18.7	14.7	16.2	11.1
1999	18.3	14.3	18.6	14.6	16.1	11.1
2000	18.2	14.2	18.5	14.5	16.1	11.1
2001	18.1	14.1	18.4	14.5	16.0	11.0
2002	18.0	14.1	18.3	14.4	16.0	10.9
2003	17.8	14.1	18.1	14.4	15.9	10.9
2004	17.6	14.1	18.0	14.4	15.7	10.9
2005	17.4	14.1	17.8	14.4	15.5	11.0
2006	17.2	14.0	17.6	14.4	15.3	11.0
			Low alternative projections (Based on high alternative projections of teachers)			
1995	18.4	14.4	18.8	14.7	16.3	11.1
1996	18.3	14.3	18.7	14.6	16.2	11.1
1997	18.2	14.3	18.6	14.6	16.1	11.1
1998	18.0	14.1	18.4	14.5	16.0	11.0
1999	17.9	14.0	18.2	14.4	15.8	10.9
2000	17.7	13.9	18.1	14.2	15.7	10.8
2001	17.6	13.8	17.9	14.1	15.5	10.7
2002	17.4	13.7	17.7	14.1	15.4	10.6
2003	17.2	13.7	17.5	14.0	15.3	10.6
2004	17.0	13.6	17.3	14.0	15.1	10.6
2005	16.8	13.6	17.1	13.9	14.9	10.6
2006	16.6	13.6	16.9	13.9	14.7	10.6
			High alternative projections (Based on low alternative projections of teachers)			
1995	18.5	14.4	18.8	14.7	16.3	11.1
1996	18.5	14.4	18.9	14.8	16.4	11.2
1997	18.6	14.5	19.0	14.9	16.5	11.3
1998	18.7	14.5	19.1	14.9	16.5	11.3
1999	18.7	14.6	19.1	14.9	16.5	11.3
2000	18.7	14.5	19.1	14.9	16.5	11.3
2001	18.7	14.5	19.1	14.9	16.6	11.3
2002	18.6	14.6	19.0	14.9	16.5	11.3
2003	18.5	14.6	18.9	14.9	16.5	11.3
2004	18.4	14.6	18.7	15.0	16.4	11.3
2005	18.2	14.6	18.5	15.0	16.2	11.4
2006	18.0	14.6	18.4	14.9	16.0	11.5

[1] Estimated on the basis of past data.
[2] Estimate.
[3] Projected.

NOTE: The pupil-teachers ratios were derived from tables 2 and 32. Some data have been revised from previously published figures. Projections are based on data through 1992.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Schools*; Common Core of Data surveys; "Private Elementary and Secondary Education, 1983: Enrollment, Teachers, and Schools," *NCES Bulletin*, December 1984; 1985 Private School Survey; "Key Statistics for Private Elementary and Secondary Education: School Year 1988–89," *Early Estimates*; "Key Statistics for Private Elementary and Secondary Education: School Year 1990–91," *Early Estimates*; Public and Private Elementary and Secondary Education Statistics: School Year 1991–92," *Early Estimates*; and "Public and Private Elementary and Secondary Education Statistics: School Year 1992–93," *Early Estimates*. (This table was prepared October 1995.)

Chapter 6

Expenditures of Public Elementary and Secondary Schools

Current expenditures are projected to increase by 41.4 percent in current dollars and average annual teacher salaries in public elementary and secondary schools are projected to increase by 6.2 percent between school years 1992–93 and 2005–2006 (also in current dollars) in the middle set of projections presented in this chapter. These projections are based on assumptions concerning economic growth and assistance by state governments to local governments; these assumptions are discussed in this chapter. Other sets of projections, based on alternative economic scenarios, are also discussed. No projections for private schools are presented as there are no regular data collections for private school expenditures.

Current Expenditures

Past Trends

Current expenditures increased from $159.3 billion in 1980–81 to $227.1 billion in 1992–93 using constant 1993–94 dollars (table 34 and figure 51). (The 1992–93 school year is the last year for which current expenditures are available.) This was an increase of 42.6 percent. Current expenditures are estimated to increase to $243.7 billion by 1994–95, an increase of 53.0 percent since 1980–81. From 1980–81 to 1992–93, current expenditures per pupil in average daily attendance rose 35.8 percent to $5,741 (table 34 and figures 52 and 53). Current expenditures per pupil in average daily attendance increased an estimated 40.5 percent from 1980–81 to 1994–95. Current expenditures per pupil in fall enrollment (table 35) increased 36.1 percent from 1980–81 to 1992–93.

Historically, education expenditures have followed a path similar to general economic trends. For much of the period since 1980–81, the economy has been rising. Current expenditures have also been rising during that period. (See figure 54 for a comparison of the growth rates of current expenditures per pupil and one major indicator of the state of the economy, disposable income per capita.)

The amount that local governments spend on education is also historically associated with the amount of state education aid to local governments. There was also a rapid rise in state education aid to local governments during the period from 1980–81 to 1992–93. (See figure 55 for a comparison of the growth rates of current expenditures per pupil and revenue receipts from state sources per capita).

The only time recently in which current expenditures decreased was from 1977–78 to 1981–82. The following events may account for part of that decline. First, disposable income per capita and state education aid per capita were in periods of either slow growth or decline at that time. Second, this was the period of the "tax revolt," when many voters expressed their displeasure at the spending habits of state or local governments by voting for measures that would limit taxes or spending. Third, it was also a period of high inflation, when state and local governments may have had difficulty anticipating the rapid rise in school costs. Also, enrollments, which had already been in a period of decline, fell sharpely from 1977–78 to 1981–82. During that period, average daily attendance fell 7.4 percent.

Current expenditures have increased each year since 1981–82. The percent increase has not been constant over that time however. Most of the largest of the percent increases occurred from 1984–85 to 1988–89. That was the period when disposable income per capita and state education aid per capita were also increasing most rapidly. Also during that period, enrollments, which had been falling since the early 1970s, entered a period of steady increases. Since 1988–89, current expenditures have not been increasing as rapidly. Disposable income per capita and state education aid per capita have been increasing at lower rates than in the mid-1980s as well.

The percentage of total disposable income spent on public elementary and secondary school current expenditures has increased slightly from 1980–81 (4.5 percent) to 1992–93 (4.8 percent). This percentage was not stable during this period however. It fell to 4.3 percent in 1983–84 before beginning to rise again. The year 1983–84 is notable because enrollment as measured by average daily attendance reached its lowest level since 1962–63 and has been increasing annually since then.

Current expenditures per pupil as a percentage of disposable income per capita rose from 27.2 percent in 1979–80 to 31.2 percent in 1992–93.

Alternative Projections

The level of spending on elementary and secondary education has followed a path similar to the economic climate of the nation and the amount of revenue receipts

provided by state governments to local governments for education. Regression equations were used to develop the forecasts for current expenditures, with a measure of the state of the economy (disposable income per capita) and the amount of revenue receipts from state sources for education used as two factors associated with current expenditures. Several plausible growth paths for disposable income per capita and revenue receipts from state sources were used to produce alternative sets of projections for current expenditures. Hence, the forecasts for current expenditures depend on the forecasts for these inputs. Another important factor is that the relationships that have existed among the variables in the past continue throughout the projection period.

Three sets of projections are presented for current expenditures in this chapter. These sets of forecasts are based on alternative projections for disposable income per capita and local government revenue receipts from state sources per capita. The U.S. Quarterly Model of the economic consulting firm DRI/McGraw-Hill (DRI) was used in developing forecasts of both disposable income per capita and revenue receipts from state sources. The assumptions underlying each set of alternative projections for current expenditures are described briefly. For more information about these assumptions and about the methodology used to compute these forecasts, see appendix A5. The values of disposable income per capita and local government revenue receipts from state sources per capita are shown in Appendix B.

The middle alternative projections are based on the assumptions that disposable income per capita will increase at rates between 1.1 percent and 1.7 percent during the period from 1995–96 to 2005–2006 and that revenue receipts from state sources per capita will increase at rates between 0.8 percent and 2.8 percent.

The low alternative projections are based on the assumptions that disposable income per capita will change at rates between 0.1 percent and 1.6 percent and that revenue receipts from state sources per capita will increase at rates between 0.2 percent and 2.2 percent.

The high alternative projections are based on the assumptions that disposable income will increase at rates between 1.4 percent and 2.3 percent and that revenue receipts from state sources will increase at rates between 1.1 percent and 3.8 percent.

A third factor influencing the growth in current expenditures in these projections is the ratio of enrollment (as measured by average daily attendance) to the population. The same projections for enrollment and the population are used in the production of all sets of projections for current expenditures presented in this chapter.

Enrollments are projected to increase steadily during the forecast period. With enrollments rising, communities should have less money to spend per pupil than if enrollments had remained unchanged. However, this expected increase in enrollment should also have a strong positive effect on total expenditures. With enrollments expected to rise, total expenditures should grow at a higher rate than expenditures per pupil.

The projections in this chapter are presented in both constant 1993–94 dollars and in current dollars. The projections were developed in constant dollars and then placed in current dollars using projections for the Consumer Price Index (CPI). Three alternative sets of projections for the CPI were developed, one for each of the alternative sets of projections for current expenditures. These three alternative sets of projections for the CPI were developed simultaneously with the alternative sets of projections for disposable income per capita using the U.S. Quarterly Model. Since the set of projections for the CPI developed for use with the low alternative projections is rising at the fastest rate and that developed for use with the high alternative projections is rising at the slowest rate, it will frequently be the case that the current dollar projections from the low alternative set of projections are higher than those from the other two alternative sets of projections.

In the middle alternative projections, current expenditures in constant 1993–94 dollars are projected to increase steadily throughout the forecast period, reaching $321.2 billion in 2005–2006. This is an increase of 41.4 percent over the 1992–93 level, and 31.8 percent over the estimated level for 1994–95. Current expenditures are projected to increase most rapidly during the period from 1995–96 to 1999–2000. This is also the period during which enrollments are increasing most rapidly.

Current expenditures per pupil in average daily attendance are projected to increase by 24.3 percent to $7,138 from 1992–93 to 2005–2006 (table 34 and figures 51 and 51).

In the middle alternative projection, total current expenditures as a percentage of total disposable income are projected to increase from 4.8 percent in 1992–93 to 5.1 percent in 2005–2006. One cause of this projected increase is the large increase in enrollment projected for this period. Enrollment as measured by average daily attendance is projected to increase by 13.7 percent.

Current expenditures per pupil as a percentage of disposable income per capita are also projected to increase, from 31.2 percent to 32.2 percent.

In the low alternative projections, both disposable income per capita and revenue receipts from state sources are projected to increase more slowly than in the middle set of projections. As a result, both current expenditures and current expenditures per pupil are projected to increase more slowly than in the middle set of projections. Current expenditures are projected to increase by 30.9 percent from 1992–93 to 2005–2006, reaching $297.2 billion at the end of the forecast period. Current expenditures per pupil in average daily attendance are projected to reach $6,606 by 2005–2006, an increase of 15.1 percent.

In the high alternative projections, both disposable income per capita and revenue receipts from state sources per capita are projected to increase more rapidly than in the middle set of projections. Current expenditures are projected to increase by approximately 51.5 percent over the 1992–93 level to $344.0 billion in 2005–2006. Current expenditures per pupil in average daily attendance are projected to increase by 33.2 percent to $7,646.

Teacher Salaries

Past Trends

The period from 1980–81 to 1994–95 has been dominated by two different patterns for teacher salaries in constant dollars (table 36 and figures 56 and 57).

In 1980–81, teacher salaries had reached the bottom of what had been a rather long period of steady declines, and then entered a period of steady and relatively rapid growth. From 1980–81 to 1989–90, teacher salaries increased 21.2 percent, from $29,804 to $36,130. During this period, current expenditures and the revenues of state governments were increasing rapidly. (See figure 59 for a comparison of the growth rates for teacher salaries and current expenditures per pupil.) It was during that period when enrollment, which had also been in a period of steady decline, began increasing again.

From 1989–90 to 1994–95, teacher salaries declined 0.6 percent. (Unlike current expenditures, there are values for teacher salaries for 1993–94 and 1994–95.) During much of that period, the economy, current expenditures, and revenues of state and local governments have not been increasing as rapidly as earlier.

In the 1970s, the number of people preparing to become teachers was much greater than the number of openings for newly qualified teachers. The drop in teacher salaries during this time may be attributed, in part, to excess supply. Then the number of people preparing to become teachers dropped, and eventually, the decline in teacher salaries stopped. Another factor that may have had a role in the drop in teacher salaries in constant dollars during the 1970s were the large increases in the inflation rate that occurred during that period. Some of the increase in teacher salaries that occurred during the 1980s may be a result of the reforms enacted to encourage more people to enter the teaching profession.

Alternative Projections

As with current expenditures, a multiple linear regression model was developed for teacher salaries. Teacher salaries are seen as being related to current expenditures and enrollments. (See appendix A5.) Also like current expenditures, these projections depend on the projections of these inputs, and assume that the relationships that have existed among the variables in the past will continue throughout the projection period.

Three sets of alternative projections of teacher salaries—middle, low, and high—have been developed. Each alternative is based on one of the alternative sets of projections for current expenditures presented earlier in this chapter.

The projections for average daily attendance were produced by using the growth rates of the projections for fall enrollment presented in chapter 1. The same projections for average daily attendance were used for each of the three sets of projections for teacher salaries. Enrollments are projected to increase throughout the projection period, with the greatest percent increase occurring in the mid-1990s.

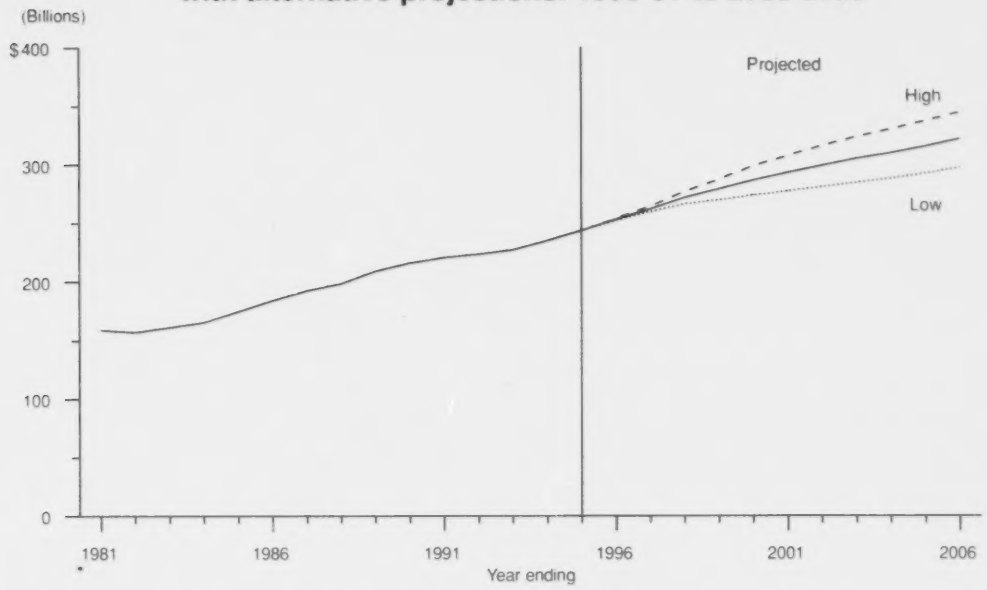
As with current expenditures, the three alternative sets of projections for the Consumer Price Index (CPI) developed using the U.S. Quarterly Model were used to place the constant dollar projections into current dollars. As the set of projections for the CPI developed for use with the low alternative projections is rising at the most rapid rate and that developed for use with the high alternative projections is rising at the slowest rate, in some years, the current dollar teacher salary projections from the low alternative set of projections are higher than those from the other two alternative sets of projections.

In the middle alternative projections, the average teacher salary in constant 1993–94 dollars is projected to reach $38,182 in 2005–2006 (table 36 and figure 56). This is a 6.3-percent increase from the level estimated for 1994–95.

In the low alternative projections, teacher salaries are projected to rise slowly throughout the projection period. The average salary is projected to reach $36,838 in 2005–2006, an increase of about 2.6 percent from 1994–95. (See figure 57 for a comparison of the growth rates for the alternative sets of projections.)

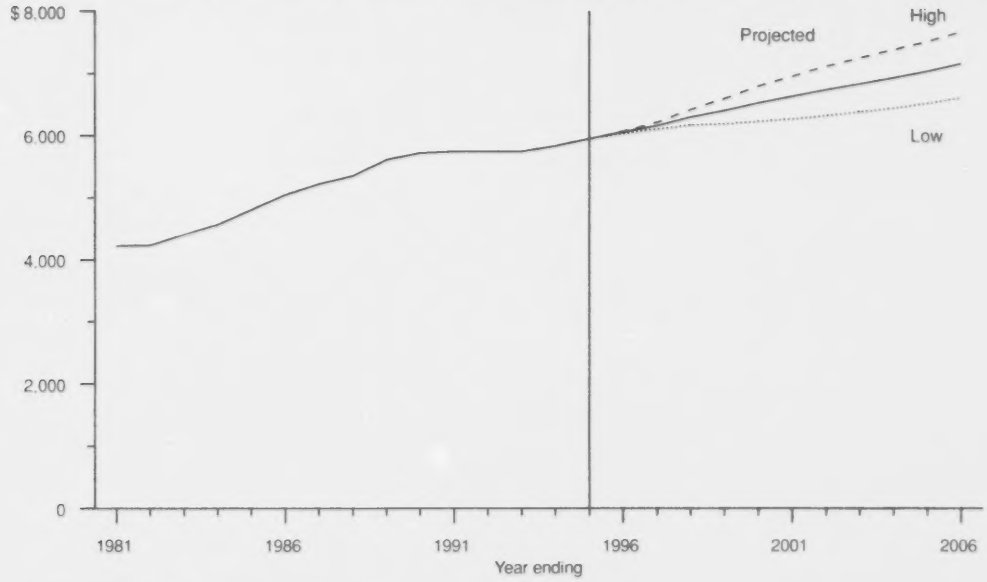
In the high alternative projections, the average teacher salary is projected to reach $39,416 in 2005–2006, an increase of about 9.8 percent.

Figure 51
Current expenditures of public schools (in constant 1993-94 dollars), with alternative projections: 1980-81 to 2005-2006



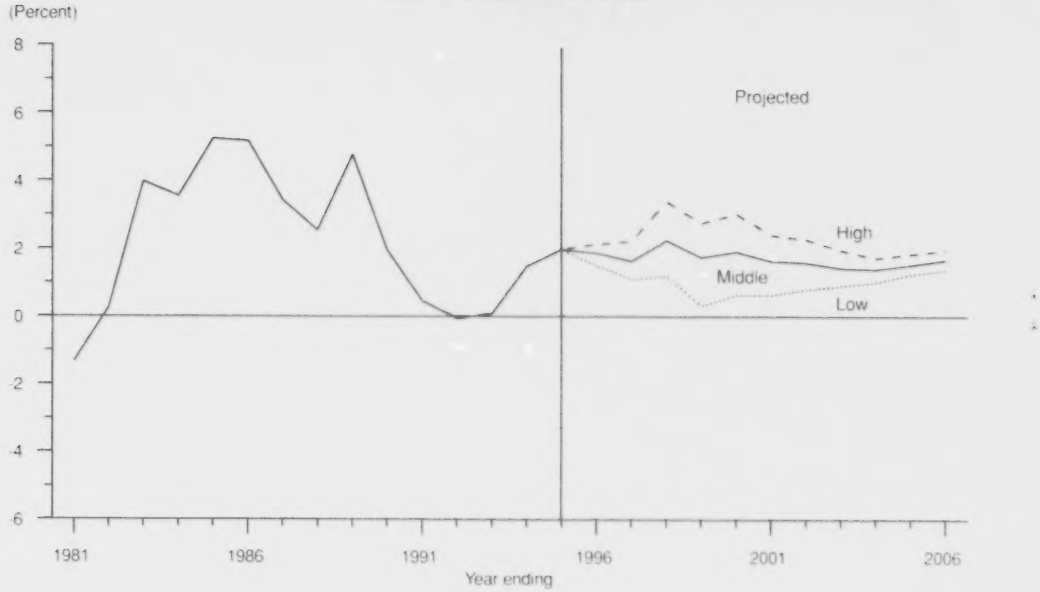
NOTE: Data for 1993-94 and 1994-95 are projected.

Figure 52
Current expenditures per pupil in average daily attendance (in constant 1993-94 dollars) of public schools, with alternative projections: 1980-81 to 2005-2006



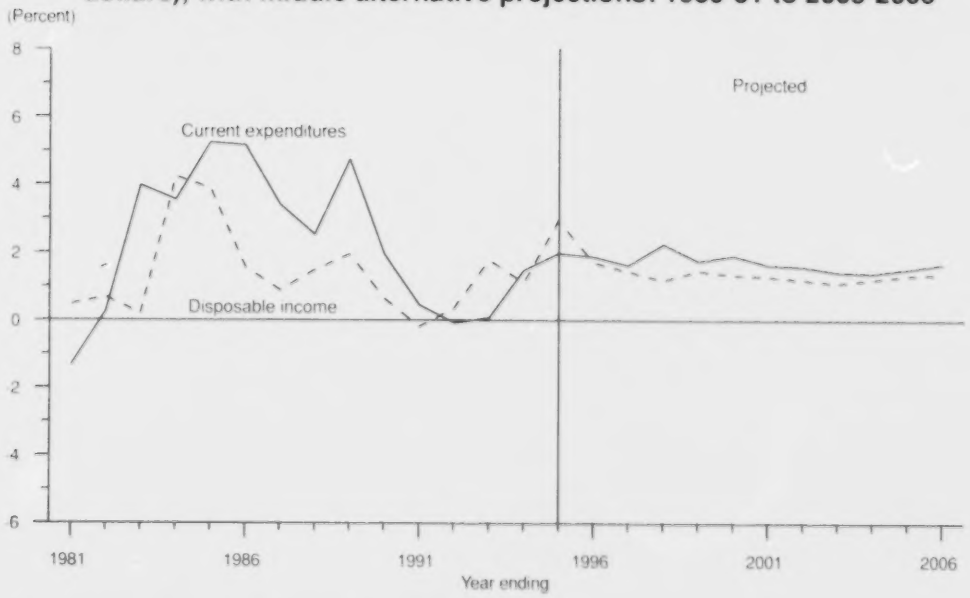
NOTE: Data for 1993-94 and 1994-95 are projected.

Figure 53
Percent change in current expenditures per pupil in average daily attendance (in constant dollars) of public schools, with alternative projections: 1980-81 to 2005-2006



NOTE: Data for 1993-94 and 1994-95 are projected.

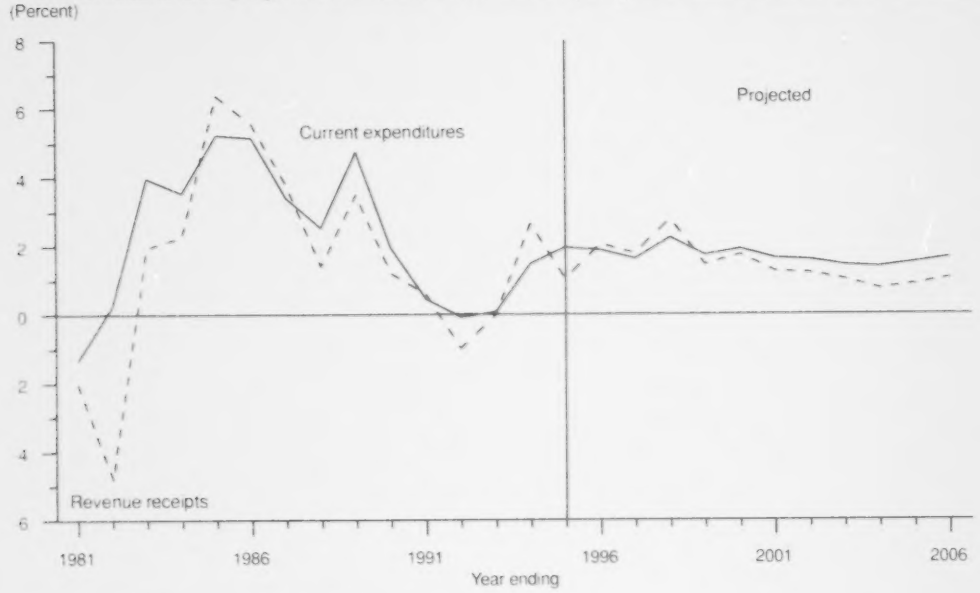
Figure 54
Percent change in current expenditures per pupil in average daily attendance of public schools and disposable income per capita (both in constant dollars), with middle alternative projections: 1980-81 to 2005-2006



NOTE: Data for current expenditures for 1993-94 and 1994-95 are projected.

Figure 55

Percent change in current expenditures per pupil in average daily attendance of public schools and education revenue receipts from state sources per capita (both in constant dollars), with middle alternative projections: 1980-81 to 2005-2006



NOTE: Data for 1993-94 and 1994-95 are estimated using past data.

Figure 56
Average annual salaries of teachers (in constant 1993-94 dollars) in public schools, with alternative projections: 1980-81 to 2005-2006

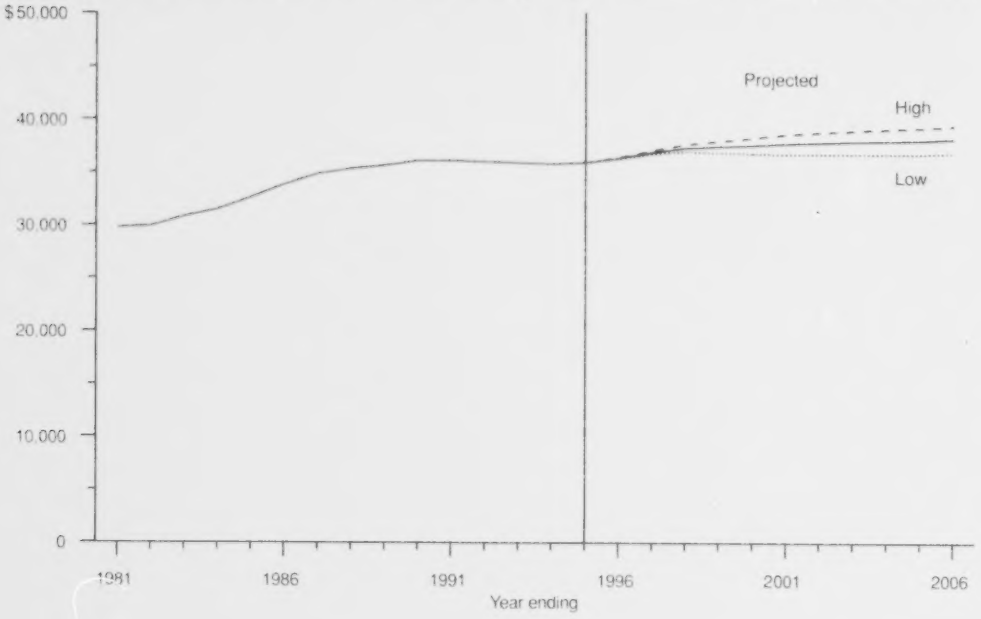


Figure 57
Percent change in average annual salaries of teachers (in constant dollars) in public schools, with alternative projections: 1980-81 to 2005-2006

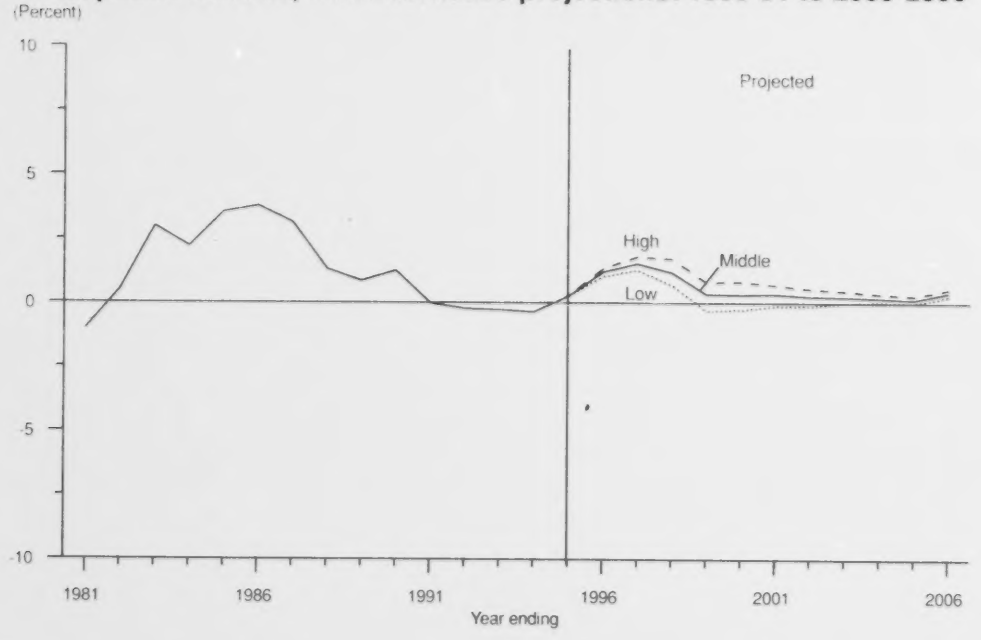


Figure 58
Percent change in average annual salaries of teachers (in constant dollars) in public schools and average daily attendance, with middle alternative projections: 1980-81 to 2005-2006

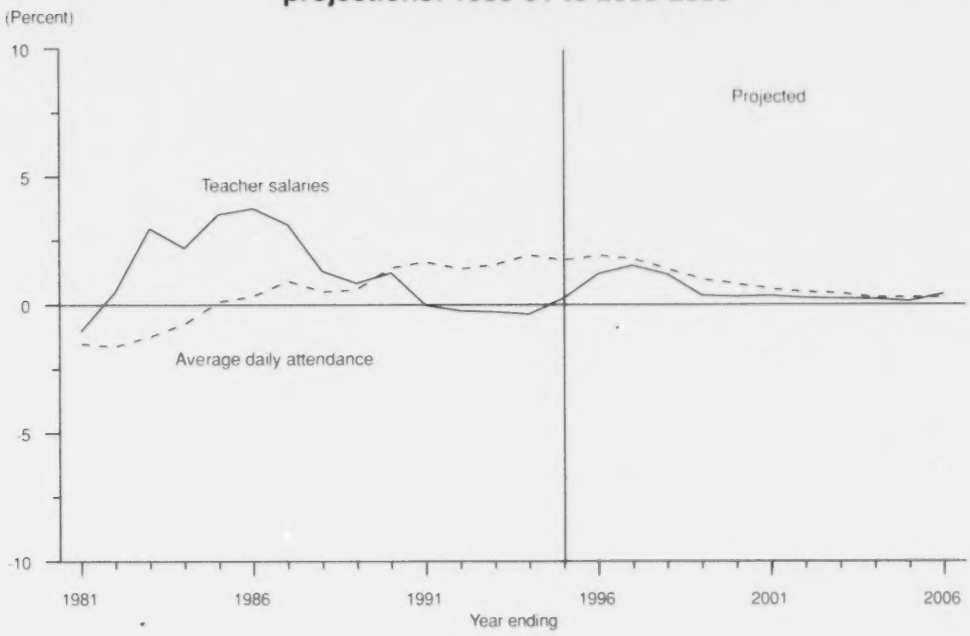
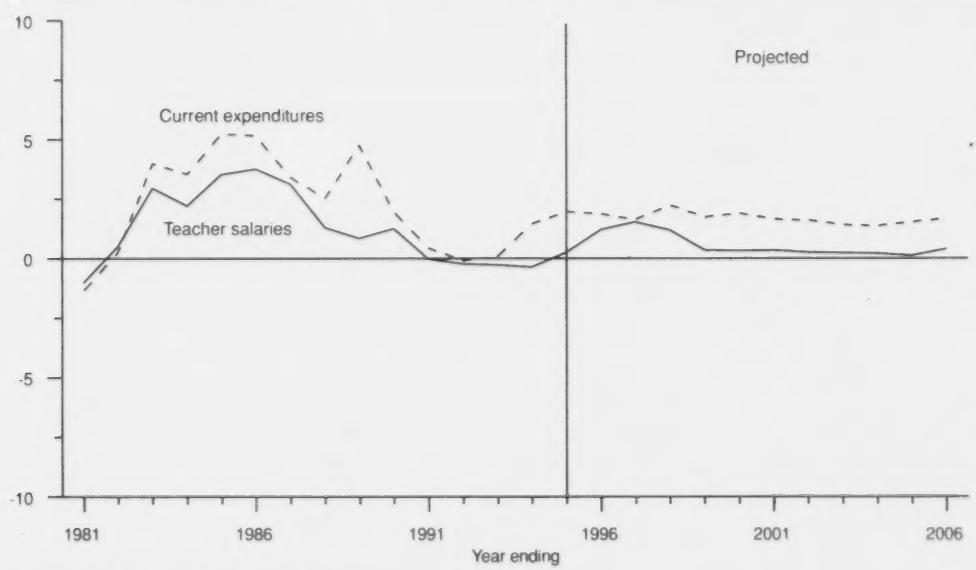


Figure 59
Percent change in average annual salaries of teachers in public schools, and current expenditures per pupil in average daily attendance of public schools (both in constant dollars), with middle alternative projections: 1980-81 to 2005-2006



NOTE: Data for current expenditures for 1993-94 and 1994-95 are estimated.

Table 34.—Current expenditures and current expenditures per pupil in average daily attendance (ADA) in public elementary and secondary schools, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	ADA (in thousands)	Current expenditures			
		Constant 1993–94 dollars [1]		Current dollars [2]	
		Total (in billions)	Per pupil in ADA	Total (in billions)	Per pupil in ADA
1981	37,704	$159.3	$4,226	$94.3	$2,502
1982	37,095	157.1	4,236	101.1	2,726
1983	36,636	161.4	4,405	108.3	2,955
1984	36,363	165.8	4,561	115.4	3,173
1985	36,404	174.7	4,800	126.3	3,470
1986	36,523	184.3	5,047	137.2	3,756
1987	36,864	192.4	5,219	146.4	3,970
1988	37,051	198.3	5,352	157.1	4,240
1989	37,268	208.9	5,606	173.1	4,645
1990	37,799	216.0	5,715	187.6	4,962
1991	38,427	220.6	5,741	202.0	5,258
1992	38,961	223.5	5,737	211.2	5,421
1993	39,567	227.1	5,741	221.4	5,594
1994 [3]	40,335	234.9	5,825	234.9	5,825
1995 [3]	41,034	243.7	5,939	250.6	6,108
		Middle alternative projections			
1996	41,819	253.0	6,049	268.0	6,408
1997	42,570	261.7	6,148	286.1	6,721
1998	43,163	271.3	6,285	306.0	7,090
1999	43,593	278.7	6,394	324.9	7,453
2000	43,943	286.3	6,515	345.0	7,852
2001	44,213	292.8	6,622	—	—
2002	44,431	298.9	6,727	—	—
2003	44,627	304.5	6,823	—	—
2004	44,749	309.5	6,917	—	—
2005	44,870	315.1	7,022	—	—
2006	44,993	321.2	7,138	—	—
		Low alternative projections			
1996	41,819	252.1	6,028	268.4	6,419
1997	42,570	259.4	6,094	289.0	6,789
1998	43,163	266.2	6,167	311.0	7,206
1999	43,593	269.7	6,186	331.1	7,595
2000	43,943	273.5	6,225	352.7	8,027
2001	44,213	277.0	6,265	—	—
2002	44,431	280.6	6,315	—	—
2003	44,627	284.4	6,372	—	—
2004	44,749	288.0	6,437	—	—
2005	44,870	292.4	6,516	—	—
2006	44,993	297.2	6,606	—	—
		High alternative projections			
1996	41,819	253.6	6,065	268.1	6,411
1997	42,570	263.9	6,199	286.5	6,730
1998	43,163	276.6	6,409	307.7	7,129
1999	43,593	287.0	6,585	328.0	7,524
2000	43,943	298.1	6,784	350.3	7,971
2001	44,213	307.1	6,946	—	—
2002	44,431	315.6	7,103	—	—
2003	44,627	323.2	7,241	—	—
2004	44,749	329.6	7,366	—	—
2005	44,870	336.6	7,501	—	—
2006	44,993	344.0	7,646	—	—

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

[3] Current expenditures and average daily attendance are projected.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*; Common Core of Data survey; and the Early Estimates survey; and National Education Association, annual *Estimates of State School Statistics*. (Latest edition 1994–95. Copyright 1995 by the National Education Association. All rights reserved.) (This table was prepared October 1995.)

Table 35.—Current expenditures and current expenditures per pupil in fall enrollment in public elementary and secondary schools, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Fall enrollment [1] (in thousands)	Current expenditures			
		Constant 1993–94 dollars [2]		Current dollars [3]	
		Total (in billions)	Per pupil in fall enrollment	Total (in billions)	Per pupil in fall enrollment
1981	40,877	$159.3	$3,898	$94.3	$2,307
1982	40,044	157.1	3,924	101.1	2,525
1983	39,565	161.4	4,079	108.3	2,736
1984	39,252	165.8	4,225	115.4	2,940
1985	39,208	174.7	4,456	126.3	3,222
1986	39,422	184.3	4,676	137.2	3,479
1987	39,753	192.4	4,840	146.4	3,682
1988	40,008	198.3	4,956	157.1	3,927
1989	40,188	208.9	5,199	173.1	4,307
1990	40,543	216.0	5,329	187.6	4,626
1991	41,217	220.6	5,352	202.0	4,902
1992	42,047	223.5	5,316	211.2	5,023
1993	42,816	227.1	5,305	221.4	5,170
1994 [4]	43,476	234.9	5,404	234.9	5,404
1995 [5]	44,230	243.7	5,510	250.6	5,667
		Middle alternative projections			
1996	45,076	253.0	5,612	268.0	5,945
1997	45,885	261.7	5,703	286.1	6,235
1998	46,524	271.3	5,831	306.0	6,578
1999	46,988	278.7	5,932	324.9	6,915
2000	47,365	286.3	6,045	345.0	7,285
2001	47,656	292.8	6,143	—	—
2002	47,891	298.9	6,241	—	—
2003	48,102	304.5	6,330	—	—
2004	48,234	309.5	6,417	—	—
2005	48,365	315.1	6,514	—	—
2006	48,497	321.2	6,622	—	—
		Low alternative projections			
1996	45,076	252.1	5,592	268.4	5,955
1997	45,885	259.4	5,654	289.0	6,299
1998	46,524	266.2	5,721	311.0	6,685
1999	46,988	269.7	5,739	331.1	7,046
2000	47,365	273.5	5,775	352.7	7,447
2001	47,656	277.0	5,812	—	—
2002	47,891	280.6	5,859	—	—
2003	48,102	284.4	5,911	—	—
2004	48,234	288.0	5,972	—	—
2005	48,365	292.4	6,045	—	—
2006	48,497	297.2	6,129	—	—
		High alternative projections			
1996	45,076	253.6	5,627	268.1	5,948
1997	45,885	263.9	5,751	286.5	6,244
1998	46,524	276.6	5,946	307.7	6,614
1999	46,988	287.0	6,109	328.0	6,981
2000	47,365	298.1	6,294	350.3	7,395
2001	47,656	307.1	6,445	—	—
2002	47,891	315.6	6,590	—	—
2003	48,102	323.2	6,718	—	—
2004	48,234	329.6	6,834	—	—
2005	48,365	336.6	6,959	—	—
2006	48,497	344.0	7,094	—	—

[1] Each enrollment number is for the fall of the school year ending in the school year shown in column 1. Hence, the enrollment number listed for 1981 is for fall 1980.

[2] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[3] Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

[4] Current expenditures are projected.

[5] Current expenditures are projected and fall enrollment is an early estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*; *Statistics of Public Elementary and Secondary Schools*; "Selected Public and Private Elementary and Secondary Education Statistics," NCES Bulletin, October 23, 1979; Common Core of Data survey; and the Early Estimates survey; and National Education Association, annual *Estimates of State School Statistics*. (Latest edition 1994–95. Copyright 1995 by the National Education Association. All rights reserved.) (This table was prepared October 1995.)

Table 36.—Average annual salaries of classroom teachers in public elementary and secondary schools, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Constant 1993–94 dollars[1]	Current dollars[2]
1981	$29,804	$17,644
1982	29,955	19,274
1983	30,845	20,695
1984	31,526	21,935
1985	32,640	23,600
1986	33,867	25,199
1987	34,927	26,569
1988	35,383	28,034
1989	35,683	29,564
1990	36,130	31,367
1991	36,126	33,085
1992	36,044	34,063
1993	35,944	35,029
1994	35,819	35,819
1995	35,908	36,933
	Middle alternative projections	
1996	36,343	39,808
1997	36,898	41,713
1998	37,336	43,554
1999	37,468	45,164
2000	37,588	46,843
2001	37,717	—
2002	37,814	—
2003	37,905	—
2004	37,982	—
2005	38,029	—
2006	38,182	—
	Low alternative projections	
1996	36,282	39,953
1997	36,749	42,336
1998	37,010	44,717
1999	36,901	46,847
2000	36,804	49,072
2001	36,763	—
2002	36,724	—
2003	36,725	—
2004	36,739	—
2005	36,738	—
2006	36,838	—
	High alternative projections	
1996	36,386	39,772
1997	37,042	41,581
1998	37,675	43,337
1999	37,982	44,877
2000	38,297	46,528
2001	38,561	—
2002	38,778	—
2003	38,963	—
2004	39,104	—
2005	39,208	—
2006	39,416	—

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

SOURCE: National Education Association, annual *Estimates of State School Statistics*. (Latest edition 1994–95. Copyright 1995 by the National Education Association. All rights reserved.) (This table was prepared October 1995.)

Chapter 7

Expenditures of Institutions of Higher Education

The steady growth in higher education expenditures that has marked the 1980s and early 1990s is expected to continue throughout the 1990s and beyond. Key assumptions behind these projections are that the economy continues to grow at a steady rate, that inflation rates remain near current levels, and that enrollments increase as in the middle alternative projections presented in chapter 2. Projections based on alternative economic scenarios are discussed below.

The higher education system is examined by both control of institution (public versus private) and by type of institution (4-year versus 2-year). For each of these sectors of higher education, two different types of expenditures—current-fund expenditures and educational and general expenditures—are examined. Educational and general expenditures consist only of that portion of current-fund expenditures that are for activities that are directly related to the education of students. Expenditures for such activities as auxilary enterprises are excluded. All expenditure data have been adjusted for inflation. Since the historical trends and the projections of current-fund expenditures and educational and general expenditures are very similar, emphasis is given to current-fund expenditures.

Past Trends

Following a well-established trend, current-fund expenditures have increased significantly since 1980–81 (table 37 and figure 60). In real terms, current-fund expenditures increased 56.7 percent from 1980–81 to 1992–93. (1992–93 is the last year for which there are actual data.) From 1980–81 to 1994–95, current-fund expenditures are estimated to have increased 63.8 percent. The rate of increase in current-fund expenditures during this period has not been consistent. There have been years of rapid growth and slow growth, and even decline. Factors that can be associated with current-fund expenditures during these periods include: (1) the economy as a whole, and, for public institutions, the economic situation of state and local governments; (2) the inflation rate; and (3) enrollments.

Current-fund expenditures grew slowly from 1980–81 to 1981–82. During that period, current–fund expenditures increased 1.0 percent, from $108.2 billion to $109.3 billion in constant 1993–94 dollars. The economy was in a period of slow growth at that time. One measure of the state of the economy, disposable income per capita, rose only 0.7 percent. Inflation was also increasing rapidly. The average annual inflation rate for that period was over 11.6 percent as measured by the Consumer Price Index.

Current-fund expenditures have risen steadily since 1981–82. From 1981–82 to 1992–93, current-fund expenditures increased 55.1 percent.

The greatest increases occurred from 1981–82 to 1986–87, when current–fund expenditures rose 27.2 percent. The economy was increasing steadily during that period with disposable income per capita rising 11.1 percent.

Much of the 22.0 percent increase that occurred from 1986–87 to 1992–93 was due to the rapid increase in enrollments that occurred during that time. The number of students as measured by full-time-equivalent enrollment rose 15.5 percent. From 1981–82 to 1986–87, full-time-equivalent enrollment rose by 0.5 percent.

While current-fund expenditures in both public and private institutions rose, they did not rise at the same rate. From 1980–81 to 1992–93, current-fund expenditures increased 50.2 percent in public institutions and 69.3 percent in private institutions.

For the period under examination, educational and general expenditures have been an almost constant percentage of current-fund expenditures (about 78 percent). Hence, the trend for educational and general expenditures is virtually identical to that for current-fund expenditures (table 38 and figure 61). Total educational and general expenditures in constant dollars increased 56.5 percent from 1980–81 to 1992–93. There was a 47.9 percent increase in educational and general expenditures in public colleges from 1980–81 to 1992–93 and a 74.8 percent increase in private colleges.

Since the trends of current-fund expenditures for the different sectors show some differences, the data are examined separately for each sector, except private 2-year institutions. Expenditures are examined both as a total and per student in full-time-equivalent (FTE) enrollment.

The trend for private 2-year projections is not shown separately because there have been significant additions to the universe of private 2-year institutions since 1980–81. Private 2-year institutions comprise the smallest of the higher education sectors. In 1992–93, they accounted for only 1.0 percent of total current-fund expenditures and 2.0 percent of FTE enrollment.

Public 4-Year Institutions

The trend for current-fund expenditures in public 4-year institutions is very similar to that for all institutions (table 39). The period from 1980–81 to 1981–82 saw current-fund expenditures increase only 0.5 percent. Since then, current expenditures have increased steadily. From 1981–82 to 1992–93 current-fund expenditures increased 50.8 percent. As with the trend for all institutions, the most rapid growth occurred from 1981–82 to 1986–87 when current-fund expenditures rose 25.0 percent. During that time, full-time-equivalent enrollment increased by only 1.9 percent.

When current-fund expenditures are examined on a per student basis, a somewhat different pattern emerges. With the slowing down of the economy, the rise in inflation, and the increase in enrollment, current-fund expenditures per student fell 0.7 percent from 1980–81 to 1981–82. As with total current-fund expenditures, current-fund expenditures per student rose each year from 1981–82 to 1992–93. Most of the increase occurred from 1981–82 to 1986–87 when current-fund expenditures per student rose 22.6 percent. From 1986–87 to 1992–93, when FTE enrollment rose 11.7 percent, current-fund expenditures per student only rose 7.4 percent.

The trend for educational and general expenditures (table 40) is similar to that for current-fund expenditures.

Public 2-Year Institutions

Public 2-year institutions show a similar trend to public 4-year institutions (table 41). There was a small 0.8 percent increase in current-fund expenditures in public 2-year institutions from 1980–81 to 1981–82. This was followed by an 18.3 percent increase from 1981–82 to 1986–87. A further 24.0 increase occurred from 1986–87 to 1992–93, when enrollments rose 26.6 percent.

As with public 4-year current-fund expenditures, a somewhat different pattern emerges when public 2-year current-fund expenditures are placed in per student terms. With total current-fund expenditures increasing 0.8 percent and enrollments rising 3.6 percent, current-fund expenditures per student fell 2.7 percent from 1980–81 to 1981–82. Between 1981–82 and 1986–87, current-fund expenditures per student rose 22.6 percent. From 1986–87 to 1992–93, current-fund expenditures per student fell 2.1 percent.

The trend for educational and general expenditures (table 42) is similar to that for current-fund expenditures.

Private 4-Year Institutions

From 1980–81 until 1981–82, current-fund expenditures in private 4-year institutions rose 1.9 percent. Like public institutions, current-fund expenditures rose rapidly throughout the rest of the 1980's. From 1981–82 to 1992–93, current-fund expenditures rose 66.8 percent (table 43).

With the increase in the number of students and the slowdown in the economy, expenditures per student remained unchanged from 1980–81 to 1981–82. Since then, current-fund expenditures per student have been rising. From 1981–82 to 1986–87, current-fund expenditures per student rose 31.8 percent. After that, as enrollments increased, current expenditures per student have continued to increase, but not at as rapid a rate. From 1986–87 to 1992–93, current expenditures per student rose 10.7 percent.

The trend for educational and general expenditures (table 44) is similar to that for current-fund expenditures.

Alternative Projections

Projections have been prepared for each of the sectors of higher education. With the exception of the private 2-year sector, these projections have been developed using regression models. In most cases, expenditures per student are seen as being related to the state of the economy (as measured by either disposable income per capita or the revenues of state and local governments per capita), the inflation rate, and enrollments. (For more details, see appendix A6.) Hence, the forecasts for higher education expenditures depend on the forecasts for these three types of inputs. Another important factor is that the relationships that have existed among the variables in the past continue throughout the projection period.

Three sets of projections are presented in this chapter. Each is based on an alternative set of assumptions for the state of the economy, specifically, a different growth path for either disposable income per capita or the revenues of state and local governments per capita. These alternative scenarios for the state of the economy were developed using the U.S. Quarterly Model developed by DRI/McGraw-Hill.

The middle alternative projections are based on the assumption that the economy continues to grow at a steady rate (disposable income per capita increases each year from 1995–96 to 2005–2006 at a rate between 1.1 and 1.7 percent and the revenues of state and local governments per capita increase at rates between 1.0 percent and 2.5 percent.) Two alternative sets of projections were developed to show the impact of various economic scenarios. In the low alternative, the economy grows at a lower rate than in the middle alternative set of projections. The growth rate of disposable income per capita varies between 0.1 and 1.6 percent and that for the revenues of state and local governments per capita varies between 0.2 and 1.6 percent. In the high alternative, the economy enters a period of rapid growth and disposable income grows at rates between 1.4 and 2.3 percent and the revenues of state and local governments per capita grow at rates between 1.4 and 3.5 percent.

The three alternative sets of projections are also based on alternative projections for the inflation rate. The projections for the inflation rate were also developed using the U.S. Quarterly Model. For the forecast period, they range from 3.0 percent to 4.1 percent for the middle alternative, 3.5 percent to 5.1 percent for the low alternative, and 2.5 percent to 4.1 percent for the high alternative.

The projections of the enrollment are those for the middle alternative projections for full-time-equivalent enrollment presented in chapter 2.

The projections in this chapter are presented in both constant 1993–94 dollars and in current dollars. The projections were developed in constant dollars and then placed in current dollars using projections for the Consumer Price Index (CPI). Three alternative sets of projections for the CPI were developed, one for use with the middle alternative projections, one for use with the low alternative projections, and one for use with the high alternative projections. These three alternative sets of projections for the CPI were developed using the U.S. Quarterly Model. As the set of projections for the CPI developed for use with the low alternative projections is rising at the most rapid rate and that developed for use with the high alternative projections is rising at the slowest rate, it is frequently the case that the current dollar projections from the low alternative set of projections are higher than those from the other two alternative sets of projections.

Due to the short time series of consistent data, only one set of projections was produced for private 2-year institutions. This was included in each of the alternative projections. The set of projections for private 2-year institutions is not examined separately.

All of the alternative projections indicate an increase in current-fund expenditures throughout the remainder of the century. In the middle alternative projection, current-fund expenditures are projected to reach $237.1 billion in 2005–2006. This is a 39.8 percent increase from 1992–93, the last year for which there are actual data. In the low alternative projection, current-fund expenditures are projected to increase to $232.0 billion. In the high alternative projection, the figure for 2005–2006 is $241.5 billion.

A similar pattern is seen for educational and general expenditures. In the middle alternative projection, educational and general expenditures are projected to be $180.7 billion in 2005–2006, a 36.6–percent increase from 1992–93. In the low alternative projection, educational and general expenditures are projected to increase to $175.4 billion. In the high alternative projection, the figure for 2005–2006 is $185.5 billion.

Public 4-Year Institutions

There are only small differences in the trends among the various sectors of higher education. In public 4-year institutions, current-fund expenditures are projected to reach $126.1 billion in the middle alternative projection in 2005–2006 (table 40). This is a 42.8 percent increase from 1992–93 to 2005–2006. In the low alternative projection, the value for 2005–2006 is $124.5 billion and in the high alternative projection, it is $127.7 billion.

Since full-time-equivalent (FTE) enrollment is projected to increase by 18.1 percent from 1992–93 to 2005–2006, the rate of increase for expenditures is lower on a per student basis. In the middle alternative projection, a 21.0 percent increase is projected for the period from 1992–93 to 2005–2006 compared with 19.4 percent for the low alternative projection and 22.5 percent for the high alternative projection. The most rapid increases are projected to occur from 1992–93 to 1995–96, when FTE enrollments are projected to increase slowly.

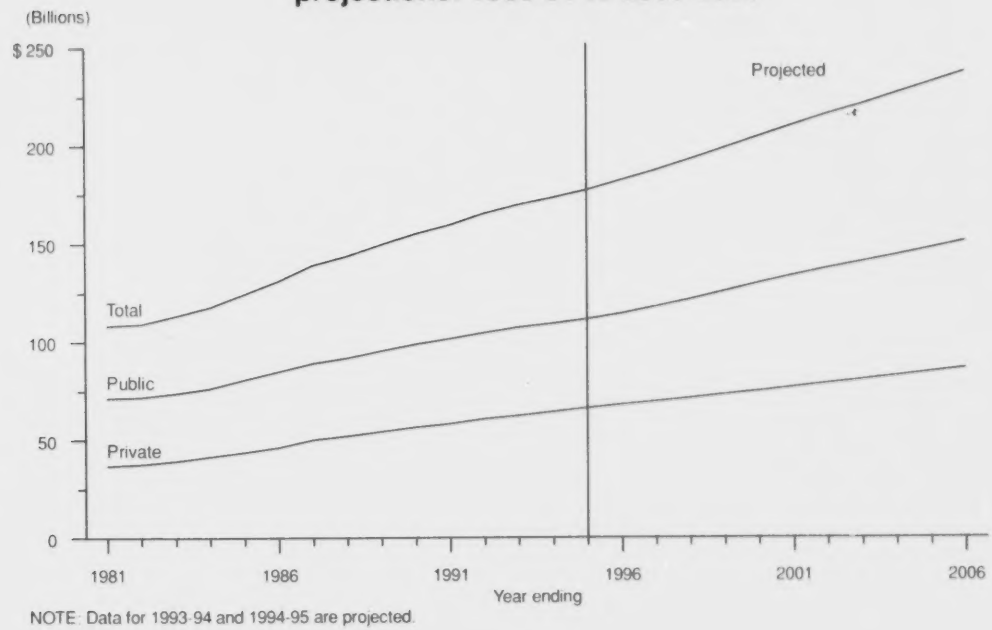
Public 2-Year Institutions

Expenditures are also seen as increasing in public 2-year institutions. For instance, in the middle alternative projection, current-fund expenditures are projected to reach $24.7 billion in 2005–2006 and expenditures per student are projected to increase to $7,113. When the low alternative projection is used, with its lower growth path for revenues of state and local governments per capita, lower values for current expenditure are found. When the high alternative projection is used, with its higher growth path for revenues of state and local governments per capita, higher values are found. The most rapid increases for expenditures per student are projected to occur from 1992–93 to 1995–96, when the slowest growth in FTE enrollments is projected.

Private 4-Year Institutions

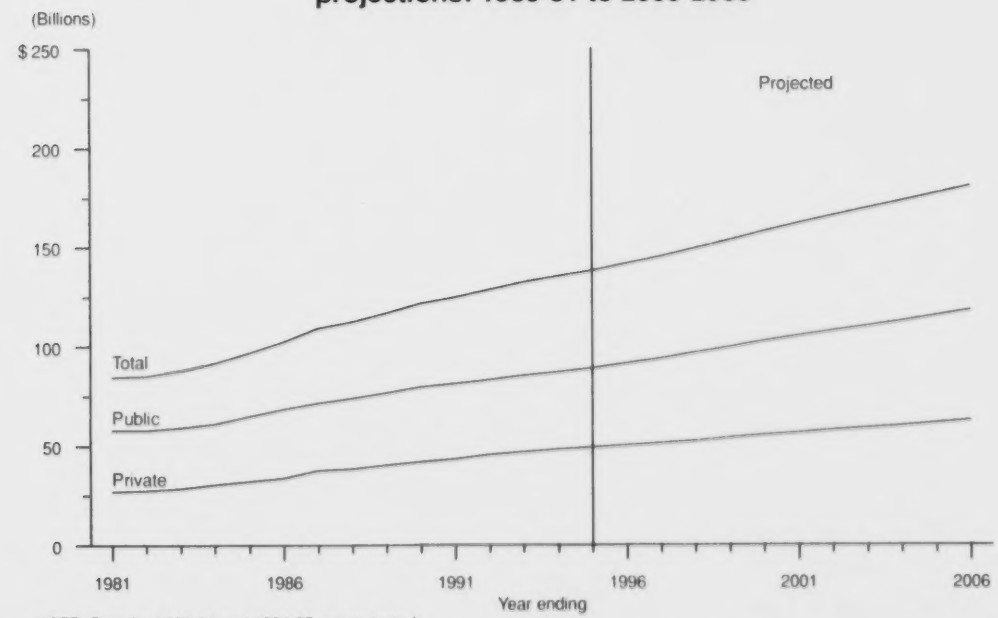
The trends for private 4-year institutions exhibit the same patterns as other types of institutions. Total current-fund expenditures are seen as increasing each year. In the middle alternative projection, from 1992–93 to 2005–2006, they are projected to increase 39.0 percent. Current-fund expenditures per student are projected to increase 17.8 percent during the same time.

Figure 60
Current-fund expenditures (in constant 1993-94 dollars) of public and private institutions of higher education, with middle alternative projections: 1980-81 to 2005-2006



NOTE: Data for 1993-94 and 1994-95 are projected.

Figure 61
Educational and general expenditures (in constant 1993-94 dollars) of public and private institutions of higher education, with middle alternative projections: 1980-81 to 2005-2006



NOTE: Data for 1993-94 and 1994-95 are projected.

Table 37.—Current-fund expenditures of public and private institutions of higher education, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Constant 1993–94 dollars[1] (in billions)			Current dollars (in billions)		
	Total	Public	Private	Total	Public	Private
1981	$108.2	$71.4	$36.8	$64.1	$42.3	$21.8
1982	109.3	71.8	37.5	70.3	46.2	24.1
1983	113.2	73.9	39.3	75.9	49.6	26.4
1984	117.8	76.3	41.5	82.0	53.1	28.9
1985	124.4	80.7	43.8	90.0	58.3	31.6
1986	131.1	84.9	46.2	97.5	63.2	34.3
1987	139.0	88.9	50.1	105.8	67.7	38.1
1988	143.6	91.7	51.9	113.8	72.6	41.1
1989	149.5	95.3	54.2	123.9	78.9	44.9
1990	155.1	98.8	56.3	134.7	85.8	48.9
1991	159.5	101.5	58.0	146.1	93.0	53.1
1992	165.3	104.6	60.7	156.2	98.8	57.3
1993	169.6	107.3	62.3	165.2	104.6	60.7
1994[2]	173.2	109.3	64.0	173.2	109.3	64.0
1995[2]	177.2	111.3	66.0	182.3	114.4	67.8
Middle alternative projections						
1996	182.0	114.3	67.7	192.8	121.1	71.7
1997	187.0	117.6	69.3	204.4	128.6	75.8
1998	192.6	121.4	71.1	217.2	137.0	80.3
1999	198.3	125.4	72.9	231.2	146.1	85.0
2000	204.3	129.5	74.7	246.2	156.1	90.0
2001	209.9	133.4	76.5	—	—	—
2002	215.4	137.0	78.4	—	—	—
2003	220.6	140.3	80.3	—	—	—
2004	226.0	143.7	82.3	—	—	—
2005	231.4	147.2	84.3	—	—	—
2006	237.1	150.8	86.3	—	—	—
Low alternative projections						
1996	181.6	114.3	67.3	193.4	121.7	71.7
1997	186.1	117.6	68.5	207.4	131.1	76.3
1998	191.0	121.0	70.0	223.2	141.4	81.7
1999	195.9	124.4	71.5	240.5	152.7	87.8
2000	201.1	128.0	73.1	259.3	165.0	94.3
2001	206.2	131.4	74.8	—	—	—
2002	211.2	134.6	76.6	—	—	—
2003	216.2	137.7	78.5	—	—	—
2004	221.3	140.9	80.4	—	—	—
2005	226.6	144.2	82.3	—	—	—
2006	232.0	147.7	84.3	—	—	—
High alternative projections						
1996	182.1	114.3	67.8	192.5	120.8	71.7
1997	187.5	117.7	69.8	203.5	127.7	75.8
1998	193.8	121.9	71.9	215.6	135.6	80.0
1999	200.1	126.4	73.8	228.7	144.4	84.3
2000	206.7	131.0	75.7	242.9	154.0	88.9
2001	212.9	135.3	77.6	—	—	—
2002	218.7	139.2	79.5	—	—	—
2003	224.3	142.9	81.4	—	—	—
2004	229.9	146.4	83.4	—	—	—
2005	235.6	150.1	85.5	—	—	—
2006	241.5	154.0	87.5	—	—	—

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

—Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education," and "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared November 1995.)

Table 38.—Educational and general expenditures of public and private institutions of higher education, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Constant 1993–94 dollars[1] (in billions)			Current dollars (in billions)		
	Total	Public	Private	Total	Public	Private
1981	$84.6	$57.7	$26.9	$50.1	$34.2	$15.9
1982	85.2	57.8	27.5	54.8	37.2	17.7
1983	87.8	59.2	28.6	58.9	39.7	19.2
1984	91.6	61.2	30.4	63.7	42.6	21.1
1985	96.9	64.8	32.1	70.1	46.9	23.2
1986	102.3	68.4	33.9	76.1	50.9	25.3
1987	109.1	71.5	37.6	83.0	54.4	28.6
1988	112.5	74.0	38.5	89.2	58.6	30.5
1989	116.8	76.6	40.3	96.8	63.4	33.4
1990	121.6	79.7	42.0	105.6	69.2	36.4
1991	124.6	81.2	43.4	114.1	74.4	39.7
1992	128.6	83.1	45.5	121.6	78.6	43.0
1993	132.3	85.4	47.0	129.0	83.2	45.8
1994[2]	135.3	87.1	48.2	135.3	87.1	48.2
1995[2]	138.0	88.9	49.1	141.9	91.5	50.5
	Middle alternative projections					
1996	141.5	91.3	50.2	149.9	96.7	53.2
1997	145.1	93.8	51.3	158.7	102.6	56.1
1998	149.2	96.7	52.5	168.4	109.1	59.2
1999	153.4	99.6	53.9	178.8	116.1	62.8
2000	157.8	102.5	55.3	190.2	123.5	66.7
2001	161.8	105.2	56.6	—	—	—
2002	165.6	107.8	57.8	—	—	—
2003	169.3	110.3	59.0	—	—	—
2004	173.0	112.8	60.1	—	—	—
2005	176.8	115.5	61.3	—	—	—
2006	180.7	118.2	62.6	—	—	—
	Low alternative projections					
1996	141.2	91.3	49.9	150.4	97.2	53.1
1997	144.3	93.8	50.5	160.8	104.6	56.2
1998	147.7	96.4	51.3	172.6	112.6	60.0
1999	151.0	98.6	52.4	185.4	121.1	64.3
2000	154.6	101.0	53.6	199.3	130.2	69.1
2001	158.0	103.3	54.7	—	—	—
2002	161.3	105.5	55.7	—	—	—
2003	164.6	107.8	56.8	—	—	—
2004	168.0	110.1	57.9	—	—	—
2005	171.6	112.6	59.0	—	—	—
2006	175.4	115.2	60.2	—	—	—
	High alternative projections					
1996	141.6	91.3	50.3	149.7	96.5	53.2
1997	145.7	93.9	51.8	158.1	101.9	56.2
1998	150.5	97.2	53.3	167.4	108.1	59.3
1999	155.4	100.5	54.9	177.5	114.8	62.7
2000	160.4	103.9	56.5	188.5	122.1	66.4
2001	165.0	107.0	57.9	—	—	—
2002	169.2	110.0	59.2	—	—	—
2003	173.2	112.8	60.4	—	—	—
2004	177.2	115.5	61.7	—	—	—
2005	181.3	118.3	63.0	—	—	—
2006	185.5	121.2	64.3	—	—	—

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

—Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education," and "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared November 1995.)

Table 39.—Current-fund expenditures and current-fund expenditures per full-time-equivalent (FTE) student of public 4-year institutions, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Full-time-equivalent enrollment (in thousands)	Current-fund expenditures			
		Constant 1993–94 dollars[1]		Current dollars	
		Total (in billions)	Per student in FTE	Total (in billions)	Per student in FTE
1981	4,159	$58.6	$14,084	$34.7	$8,338
1982	4,210	58.9	13,987	37.9	9,000
1983	4,221	60.5	14,342	40.6	9,622
1984	4,266	62.6	14,685	43.6	10,218
1985	4,237	66.4	15,674	48.0	11,333
1986	4,240	70.1	16,541	52.2	12,308
1987	4,292	73.6	17,153	56.0	13,048
1988	4,392	75.9	17,282	60.1	13,692
1989	4,502	78.9	17,520	65.3	14,516
1990	4,620	81.6	17,668	70.9	15,339
1991	4,736	83.8	17,689	76.7	16,200
1992	4,792	86.1	17,960	81.3	16,973
1993	4,795	88.3	18,418	86.1	17,949
1994[2]	4,762	90.3	18,969	90.3	18,969
1995[2]	4,717	92.3	19,569	94.9	20,128
		Middle alternative projections			
1996	4,762	94.9	19,924	100.5	21,105
1997	4,837	97.7	20,198	106.8	22,082
1998	4,923	100.8	20,476	113.7	23,100
1999	5,050	104.1	20,616	121.4	24,033
2000	5,195	107.6	20,710	129.7	24,959
2001	5,317	110.9	20,856	—	—
2002	5,397	114.0	21,116	—	—
2003	5,462	116.9	21,407	—	—
2004	5,529	119.9	21,690	—	—
2005	5,595	123.0	21,981	—	—
2006	5,661	126.1	22,278	—	—
		Low alternative projections			
1996	4,762	94.9	19,924	101.0	21,218
1997	4,837	97.7	20,199	108.8	22,505
1998	4,923	100.6	20,438	117.6	23,881
1999	5,050	103.6	20,518	127.2	25,191
2000	5,195	106.8	20,559	137.7	26,509
2001	5,317	109.9	20,667	—	—
2002	5,397	112.8	20,894	—	—
2003	5,462	115.6	21,164	—	—
2004	5,529	118.5	21,434	—	—
2005	5,595	121.5	21,714	—	—
2006	5,661	124.5	21,999	—	—
		High alternative projections			
1996	4,762	94.9	19,924	100.3	21,061
1997	4,837	97.7	20,203	106.1	21,932
1998	4,923	101.0	20,522	112.4	22,829
1999	5,050	104.6	20,714	119.5	23,669
2000	5,195	108.3	20,854	127.3	24,503
2001	5,317	111.9	21,037	—	—
2002	5,397	115.1	21,327	—	—
2003	5,462	118.2	21,643	—	—
2004	5,529	121.3	21,943	—	—
2005	5,595	124.5	22,248	—	—
2006	5,661	127.7	22,561	—	—

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

—Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education," and "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared November 1995.)

Table 40.—Educational and general expenditures and educational and general expenditures per full-time-equivalent (FTE) student of public 4-year institutions, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Full-time-equivalent enrollment (in thousands)	Educational and general expenditures			
		Constant 1993–94 dollars[1]		Current dollars	
		Total (in billions)	Per student in FTE	Total (in billions)	Per student in FTE
1981	4,159	$45.8	$11,003	$27.1	$6,514
1982	4,210	45.7	10,853	29.4	6,983
1983	4,221	46.8	11,079	31.4	7,433
1984	4,266	48.5	11,378	33.8	7,917
1985	4,237	51.6	12,174	37.3	8,802
1986	4,240	54.6	12,874	40.6	9,579
1987	4,292	57.2	13,328	43.5	10,138
1988	4,392	59.3	13,499	47.0	10,695
1989	4,502	61.3	13,613	50.8	11,279
1990	4,620	63.7	13,785	55.3	11,967
1991	4,736	64.7	13,665	59.3	12,515
1992	4,792	65.9	13,754	62.3	12,998
1993	4,795	67.7	14,114	66.0	13,755
1994[2]	4,762	69.5	14,594	69.5	14,594
1995[2]	4,717	71.3	15,122	73.4	15,554
		Middle alternative projections			
1996	4,762	73.3	15,391	77.6	16,303
1997	4,837	75.3	15,573	82.4	17,026
1998	4,923	77.6	15,755	87.5	17,774
1999	5,050	79.8	15,794	93.0	18,411
2000	5,195	82.0	15,783	98.8	19,022
2001	5,317	84.2	15,831	—	—
2002	5,397	86.3	15,998	—	—
2003	5,462	88.5	16,201	—	—
2004	5,529	90.6	16,395	—	—
2005	5,595	92.9	16,597	—	—
2006	5,661	95.1	16,805	—	—
		Low alternative projections			
1996	4,762	73.3	15,391	78.0	16,390
1997	4,837	75.3	15,575	83.9	17,352
1998	4,923	77.4	15,721	90.4	18,369
1999	5,050	79.3	15,707	97.4	19,284
2000	5,195	81.3	15,649	104.8	20,178
2001	5,317	83.3	15,662	—	—
2002	5,397	85.3	15,800	—	—
2003	5,462	87.3	15,984	—	—
2004	5,529	89.4	16,168	—	—
2005	5,595	91.5	16,360	—	—
2006	5,661	93.7	16,556	—	—
		High alternative projections			
1996	4,762	73.3	15,391	77.5	16,269
1997	4,837	75.3	15,578	81.8	16,911
1998	4,923	77.8	15,795	86.5	17,571
1999	5,050	80.2	15,881	91.6	18,147
2000	5,195	82.7	15,912	97.1	18,696
2001	5,317	85.0	15,992	—	—
2002	5,397	87.4	16,187	—	—
2003	5,462	89.6	16,411	—	—
2004	5,529	91.9	16,621	—	—
2005	5,595	94.2	16,836	—	—
2006	5,661	96.6	17,057	—	—

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

—Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education," and "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared November 1995.)

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Table 41.—Current-fund expenditures and current-fund expenditures per full-time-equivalent (FTE) student of public 2-year institutions, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Full-time-equivalent enrollment (in thousands)	Current-fund expenditures			
		Constant 1993–94 dollars[1]		Current dollars	
		Total (in billions)	Per student in FTE	Total (in billions)	Per student in FTE
1981	2,484	$12.8	$5,170	$7.6	$3,061
1982	2,573	12.9	5,031	8.3	3,237
1983	2,629	13.4	5,078	9.0	3,407
1984	2,616	13.7	5,219	9.5	3,631
1985	2,438	14.2	5,842	10.3	4,224
1986	2,428	14.8	6,094	11.0	4,534
1987	2,483	15.3	6,169	11.7	4,692
1988	2,542	15.8	6,209	12.5	4,919
1989	2,592	16.4	6,331	13.6	5,246
1990	2,751	17.2	6,241	14.9	5,418
1991	2,819	17.7	6,290	16.2	5,761
1992	3,068	18.5	6,040	17.5	5,708
1993	3,144	19.0	6,040	18.5	5,886
1994[2]	3,048	18.9	6,215	18.9	6,215
1995[2]	2,962	19.0	6,404	19.5	6,586
		Middle alternative projections			
1996	2,999	19.4	6,475	20.6	6,859
1997	3,053	19.9	6,527	21.8	7,136
1998	3,104	20.6	6,640	23.2	7,491
1999	3,180	21.3	6,685	24.8	7,792
2000	3,260	21.9	6,731	26.4	8,112
2001	3,321	22.5	6,778	—	—
2002	3,359	23.0	6,846	—	—
2003	3,380	23.4	6,919	—	—
2004	3,407	23.8	6,975	—	—
2005	3,440	24.2	7,037	—	—
2006	3,471	24.7	7,113	—	—
		Low alternative projections			
1996	2,999	19.4	6,475	20.7	6,895
1997	3,053	19.9	6,529	22.2	7,275
1998	3,104	20.4	6,579	23.9	7,688
1999	3,180	20.8	6,530	25.5	8,018
2000	3,260	21.2	6,492	27.3	8,371
2001	3,321	21.5	6,479	—	—
2002	3,359	21.8	6,496	—	—
2003	3,380	22.1	6,535	—	—
2004	3,407	22.4	6,573	—	—
2005	3,440	22.8	6,617	—	—
2006	3,471	23.2	6,674	—	—
		High alternative projections			
1996	2,999	19.4	6,475	20.5	6,844
1997	3,053	20.0	6,535	21.7	7,094
1998	3,104	20.8	6,711	23.2	7,466
1999	3,180	21.7	6,839	24.8	7,815
2000	3,260	22.7	6,959	26.7	8,176
2001	3,321	23.5	7,064	—	—
2002	3,359	24.1	7,179	—	—
2003	3,380	24.6	7,290	—	—
2004	3,407	25.1	7,375	—	—
2005	3,440	25.7	7,458	—	—
2006	3,471	26.2	7,560	—	—

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

—Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education," and "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared November 1995.)

Table 42.—Educational and general expenditures and educational and general expenditures per full-time-equivalent (FTE) student of public 2-year institutions, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Full-time-equivalent enrollment (in thousands)	Educational and General expenditures			
		Constant 1993–94 dollars[1]		Current dollars	
		Total (in billions)	Per student in FTE	Total (in billions)	Per student in FTE
1981	2,484	$12.0	$4,816	$7.1	$2,851
1982	2,573	12.1	4,694	7.8	3,020
1983	2,629	12.4	4,724	8.3	3,169
1984	2,616	12.7	4,846	8.8	3,372
1985	2,438	13.2	5,434	9.6	3,929
1986	2,428	13.8	5,679	10.3	4,225
1987	2,483	14.3	5,742	10.8	4,368
1988	2,542	14.7	5,793	11.7	4,590
1989	2,592	15.3	5,898	12.7	4,887
1990	2,751	16.0	5,810	13.9	5,044
1991	2,819	16.5	5,858	15.1	5,365
1992	3,068	17.2	5,611	16.3	5,302
1993	3,144	17.7	5,632	17.3	5,488
1994[2]	3,048	17.6	5,776	17.6	5,776
1995[2]	2,962	17.6	5,937	18.1	6,107
		Middle alternative projections			
1996	2,999	18.0	6,006	19.1	6,362
1997	3,053	18.5	6,059	20.2	6,625
1998	3,104	19.2	6,175	21.6	6,966
1999	3,180	19.8	6,226	23.1	7,257
2000	3,260	20.5	6,279	24.7	7,567
2001	3,321	21.0	6,329	—	—
2002	3,359	21.5	6,395	—	—
2003	3,380	21.8	6,461	—	—
2004	3,407	22.2	6,512	—	—
2005	3,440	22.6	6,570	—	—
2006	3,471	23.1	6,642	—	—
		Low alternative projections			
1996	2,999	18.0	6,006	19.2	6,396
1997	3,053	18.5	6,062	20.6	6,754
1998	3,104	19.0	6,112	22.2	7,142
1999	3,180	19.3	6,065	23.7	7,447
2000	3,260	19.7	6,031	25.4	7,777
2001	3,321	20.0	6,018	—	—
2002	3,359	20.3	6,031	—	—
2003	3,380	20.5	6,062	—	—
2004	3,407	20.8	6,094	—	—
2005	3,440	21.1	6,134	—	—
2006	3,471	21.5	6,186	—	—
		High alternative projections			
1996	2,999	18.0	6,006	19.0	6,349
1997	3,053	18.5	6,068	20.1	6,587
1998	3,104	19.4	6,249	21.6	6,951
1999	3,180	20.3	6,386	23.2	7,298
2000	3,260	21.2	6,516	25.0	7,656
2001	3,321	22.0	6,626	—	—
2002	3,359	22.6	6,741	—	—
2003	3,380	23.1	6,847	—	—
2004	3,407	23.6	6,928	—	—
2005	3,440	24.1	7,008	—	—
2006	3,471	24.7	7,107	—	—

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

—Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education," and "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared November 1995.)

Table 43.—Current-fund expenditures and current-fund expenditures per full-time-equivalent (FTE) student of private 4-year institutions, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Full-time-equivalent enrollment (in thousands)	Current-fund expenditures			
		Constant 1993–94 dollars[1]		Current dollars	
		Total (in billions)	Per student in FTE	Total (in billions)	Per student in FTE
1981	2,003	$35.7	$17,847	$21.2	$10,566
1982	2,041	36.4	17,852	23.4	11,487
1983	2,029	38.2	18,822	25.6	12,628
1984	2,059	40.4	19,609	28.1	13,643
1985	2,054	42.5	20,688	30.7	14,958
1986	2,053	44.9	21,849	33.4	16,257
1987	2,067	48.6	23,520	37.0	17,892
1988	2,092	50.5	24,136	40.0	19,123
1989	2,162	52.9	24,448	43.8	20,255
1990	2,195	55.0	25,038	47.7	21,737
1991	2,231	56.6	25,388	51.9	23,251
1992	2,289	59.3	25,906	56.0	24,483
1993	2,335	60.8	26,031	59.2	25,368
1994[2]	2,359	62.6	26,524	62.6	26,524
1995[2]	2,306	64.5	27,963	66.3	28,761
		Middle alternative projections			
1996	2,328	66.2	28,426	70.1	30,111
1997	2,365	67.8	28,678	74.1	31,353
1998	2,405	69.6	28,926	78.5	32,633
1999	2,466	71.3	28,915	83.1	33,707
2000	2,538	73.1	28,784	88.0	34,690
2001	2,596	74.8	28,828	—	—
2002	2,632	76.7	29,139	—	—
2003	2,663	78.6	29,514	—	—
2004	2,693	80.5	29,899	—	—
2005	2,725	82.5	30,274	—	—
2006	2,756	84.5	30,654	—	—
		Low alternative projections			
1996	2,328	65.8	28,285	70.1	30,121
1997	2,365	66.9	28,313	74.6	31,545
1998	2,405	68.4	28,434	79.9	33,224
1999	2,466	69.9	28,345	85.8	34,801
2000	2,538	71.5	28,165	92.2	36,317
2001	2,596	73.1	28,171	—	—
2002	2,632	74.9	28,456	—	—
2003	2,663	76.7	28,823	—	—
2004	2,693	78.6	29,196	—	—
2005	2,725	80.6	29,568	—	—
2006	2,756	82.5	29,948	—	—
		High alternative projections			
1996	2,328	66.3	28,493	70.1	30,119
1997	2,365	68.3	28,873	74.1	31,344
1998	2,405	70.4	29,246	78.3	32,534
1999	2,466	72.2	29,262	82.5	33,437
2000	2,538	74.0	29,172	87.0	34,276
2001	2,596	75.9	29,226	—	—
2002	2,632	77.8	29,550	—	—
2003	2,663	79.7	29,937	—	—
2004	2,693	81.7	30,324	—	—
2005	2,725	83.7	30,715	—	—
2006	2,756	85.7	31,111	—	—

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

—Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education," and "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared November 1995.)

Table 44.—Educational and general expenditures and educational and general expenditures per full-time-equivalent (FTE) student of private 4-year institutions, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Full-time-equivalent enrollment (in thousands)	Educational and general expenditures			
		Constant 1993–94 dollars[1]		Current dollars	
		Total (in billions)	Per student in FTE	Total (in billions)	Per student in FTE
1981	2,003	$26.0	$12,966	$15.4	$7,676
1982	2,041	26.6	13,015	17.1	8,374
1983	2,029	27.7	13,652	18.6	9,160
1984	2,059	29.4	14,267	20.4	9,926
1985	2,054	31.0	15,076	22.4	10,901
1986	2,053	32.8	15,970	24.4	11,883
1987	2,067	36.2	17,533	27.6	13,337
1988	2,092	37.2	17,788	29.5	14,094
1989	2,162	39.0	18,060	32.3	14,963
1990	2,195	40.7	18,556	35.4	16,110
1991	2,231	42.1	18,891	38.6	17,301
1992	2,289	44.3	19,332	41.8	18,269
1993	2,335	45.6	19,531	44.4	19,034
1994[2]	2,359	46.9	19,869	46.9	19,869
1995[2]	2,306	47.7	20,691	49.1	21,282
			Middle alternative projections		
1996	2,328	48.8	20,961	51.7	22,204
1997	2,365	49.9	21,097	54.5	23,065
1998	2,405	51.1	21,231	57.6	23,952
1999	2,466	52.4	21,240	61.1	24,759
2000	2,538	53.8	21,189	64.8	25,536
2001	2,596	55.1	21,216	—	—
2002	2,632	56.2	21,366	—	—
2003	2,663	57.4	21,542	—	—
2004	2,693	58.5	21,728	—	—
2005	2,725	59.7	21,913	—	—
2006	2,756	60.9	22,103	—	—
			Low alternative projections		
1996	2,328	48.5	20,839	51.7	22,192
1997	2,365	49.1	20,755	54.7	23,123
1998	2,405	49.9	20,737	58.3	24,230
1999	2,466	50.9	20,638	62.5	25,339
2000	2,538	52.1	20,512	67.1	26,448
2001	2,596	53.1	20,477	—	—
2002	2,632	54.2	20,581	—	—
2003	2,663	55.2	20,731	—	—
2004	2,693	56.3	20,891	—	—
2005	2,725	57.4	21,059	—	—
2006	2,756	58.5	21,234	—	—
			High alternative projections		
1996	2,328	48.9	21,026	51.7	22,225
1997	2,365	50.4	21,300	54.7	23,123
1998	2,405	51.9	21,576	57.7	24,001
1999	2,466	53.4	21,641	61.0	24,728
2000	2,538	55.0	21,654	64.6	25,442
2001	2,596	56.4	21,714	—	—
2002	2,632	57.6	21,896	—	—
2003	2,663	58.8	22,099	—	—
2004	2,693	60.1	22,300	—	—
2005	2,725	61.3	22,513	—	—
2006	2,756	62.6	22,730	—	—

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

—Projections in current dollars are not shown after 2000 due to the uncertain behavior of inflation over the long term.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education," and "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared November 1995.)

State-Level Projections

Map of the United States, by region

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Chapter 8

Public Elementary and Secondary Enrollment

Public elementary and secondary school enrollment is projected to rise between 1994 and the year 2006, but growth will vary widely across the Nation (table 45 and figure 62). Enrollment will increase most rapidly in the Western and Southern regions, where public school enrollment is expected to rise 21 percent and 10 percent, respectively. An increase of 4 percent is projected for the Northeastern region, while a smaller increase of 3 percent is expected in the Midwestern region (table 46 and figure 63).

Public School Enrollment

Between 1994 and the year 2006, public school enrollment is expected to increase, but growth will vary across the Nation. The Northeast will have enrollment increases in most states. The most notable increase will occur in New Jersey (14 percent). Smaller increases will occur in Connecticut (4 percent), Massachusetts (1 percent), New York (5 percent), and Rhode Island (1 percent). Maine is projected to show a decrease of 6 percent and Vermont will decline by 2 percent. Over the projection period, enrollment will grow between 1994 and 2000 in most states, while it will decline between 2000 and 2006.

In the Midwest, enrollment changes will vary across the region between 1994 and 2006. Increases are projected for Illinois (7 percent), Indiana (7 percent), Kansas (3 percent), Michigan (6 percent), and Ohio (1 percent). Decreases are projected for Iowa (3 percent), Minnesota (1 percent), North Dakota (8 percent), South Dakota (1 percent), and Wisconsin (1 percent). Most of the growth in the states will occur between 1994 and 2000.

Enrollment increases are projected for many of the Southern states between 1994 and 2006. Increases are projected for Alabama (15 percent), Delaware (28 percent), Florida (11 percent), Georgia (13 percent), Maryland (18 percent), North Carolina (14 percent), South Carolina (11 percent), Texas (12 percent), and Virginia (15 percent). Smaller increases are expected for Arkansas (4 percent), Kentucky (2 percent), Louisiana (1 percent), and Tennessee (7 percent). Decreases in enrollment have been projected for District of Columbia (11 percent) and West Virginia (3 percent). Most of the growth in the states will occur between 1994 and 2000.

All of the states in the West are expected to show increases in enrollment between 1994 and the year 2006. Increases are expected in Alaska (19 percent), Arizona (13 percent), California (26 percent), Colorado (11 percent), Hawaii (19 percent), Idaho (10 percent), Nevada (18 percent), New Mexico (14 percent), Oregon (16 percent), Utah (12 percent), and Washington (20 percent) over the projection period. Smaller increases are expected in Montana (1 percent) and Wyoming (7 percent). Of the states in which enrollment is projected to increase between 1994 and 2006, enrollment will increase more during the 1994–2000 period and then increase at a slower rate during the 2000–2006 period.

Elementary Enrollment

Between 1994 and 2006, public elementary school enrollment in kindergarten through grade 8 (K–8) is expected to increase 5 percent. Increases in elementary enrollment are expected to occur in most states across the Nation. These expected increases in elementary enrollment are a reflection of immigration and the rising number of births beginning in 1977, rather than changes in the attendance rates of young children. The NCES projections do not account for enrollment increases that may be caused by changing state and local policies about the provision of prekindergarten and kindergarten programs. Expansion of these programs would lead to higher enrollments at the elementary school level.

Elementary enrollment is expected to show a decrease of 2 percent in the Northeast between 1994 and 2006. Decreases are projected for Connecticut (1 percent), Maine (12 percent), Massachusetts (8 percent), New Hampshire (9 percent), New York (1 percent), Pennsylvania (5 percent), Rhode Island (7 percent), and Vermont (6 percent). An increase is projected for New Jersey (8 percent). Between 1994 and 2000, enrollment will increase in most states, while enrollment is projected to decrease between 2000 and 2006.

A slight decrease in elementary enrollment has been projected for the Midwestern region. Between 1994 and 2006, enrollment in the Midwest is projected to decrease by 1 percent. Nine of the twelve states in this region are projected to show decreases. These will occur in Iowa (6 percent), Kansas (0.3 percent), Minnesota (7 percent), Missouri (4 percent), Nebraska (4 percent), North Dakota (13 percent), Ohio (3 percent), South Dakota (4 percent),

and Wisconsin (6 percent). Increases are expected in Illinois (4 percent), Indiana (5 percent), and Michigan (2 percent).

An increase of 6 percent is expected for the Southern region between 1994 and 2006. Increases are expected in Alabama (15 percent), Delaware (28 percent), Georgia (9 percent), Maryland (12 percent), North Carolina (8 percent), South Carolina (7 percent), Texas (8 percent), and Virginia (9 percent). Smaller increases are projected for Arkansas (2 percent), Florida (4 percent), Kentucky (2 percent), and Tennessee (3 percent). A sizable decrease is projected for District of Columbia (22 percent). Other decreases are expected in Mississippi (1 percent), Oklahoma (4 percent), and West Virginia (2 percent). Most of the growth in the states will occur between 1994 and 2000.

Elementary enrollment in the Western states is expected to rise between 1994 and 2006, an increase of 15 percent. Over the projection period, enrollment increases are anticipated for Alaska (13 percent), California (20 percent), Hawaii (18 percent), Nevada (10 percent), New Mexico (12 percent), Oregon (12 percent), Utah (13 percent), and Washington, 14 percent). Other enrollment increases are projected for Arizona (8 percent), Colorado (4 percent), Idaho (7 percent), and Wyoming (6 percent). A decrease is projected for Montana (1 percent). Most of the growth in the states will occur between 1994 and 2000.

High School Enrollment

Between 1994 and 2006, enrollment in public high schools (grades 9 through 12) is expected to increase by 22 percent. Over the projection period, enrollment increases are projected in all of the regions.

Between 1988 and 1994, high school enrollment in the Northeast declined by less than 1 percent. Over the projection period, it will increase by 10 percent between 1994 and 2000, and then increase another 9 percent between 2000 and 2006. Between 1994 and 2006, increases are projected in all states in the Northeast. Increases are expected in Connecticut (21 percent), Maine (8 percent), Massachusetts (27 percent), New Hampshire (25 percent), New Jersey (30 percent), New York (17 percent), Pennsylvania (14 percent), Rhode Island (23 percent), and Vermont (9 percent). Most of the growth in the states will occur between 1994 and 2000.

The Midwestern region is expected to show an increase of 11 percent in high school enrollment between 1994 and 2006. Increases are projected for all of the states. Increases are expected in Illinois (15 percent), Indiana (12 percent), Kansas (11 percent), Michigan (14 percent), Minnesota (12 percent), Missouri (11 percent), Nebraska (10 percent), Ohio (10 percent), and Wisconsin (9 percent). Smaller increases are projected in Iowa (3 percent), North Dakota (3 percent), and South Dakota (5 percent). During the projection period, all of the states are projected to increase between 1994 and 2000, while six of the states will decline between 2000 and 2006.

Between 1994 and 2006, public high school enrollment in the South is projected to increase by 21 percent. Over the projection period, increases are expected in Delaware (29 percent), District of Columbia (23 percent), Florida (31 percent), Georgia (25 percent), Maryland (34 percent), North Carolina (30 percent), South Carolina (19 percent), Tennessee (19 percent), Texas (21 percent), and Virginia (32 percent). Other increases are expected for Alabama (15 percent), Arkansas (10 percent), and Oklahoma (12 percent). Smaller increases are projected for Kentucky (3 percent), Louisiana (6 percent), and Mississippi (4 percent). West Virginia will decline by 6 percent.

The Western region's public high school enrollment is expected to increase by 35 percent between 1994 and 2006. Between 1994 and 2006 particularly large increases have been projected for Alaska (34 percent), Arizona (29 percent), California (44 percent), Colorado (30 percent), Hawaii (20 percent), Nevada (41 percent), New Mexico (19 percent), Oregon (27 percent), and Washington (35 percent). Smaller increases are expected for Idaho (15 percent), Montana (8 percent), Utah (11 percent), and Wyoming (9 percent). Most of the growth in the states will occur between 1994 and 2000.

Figure 62
Percent change in grades K-12 enrollment in public schools, by state: Fall 1994 to Fall 2006

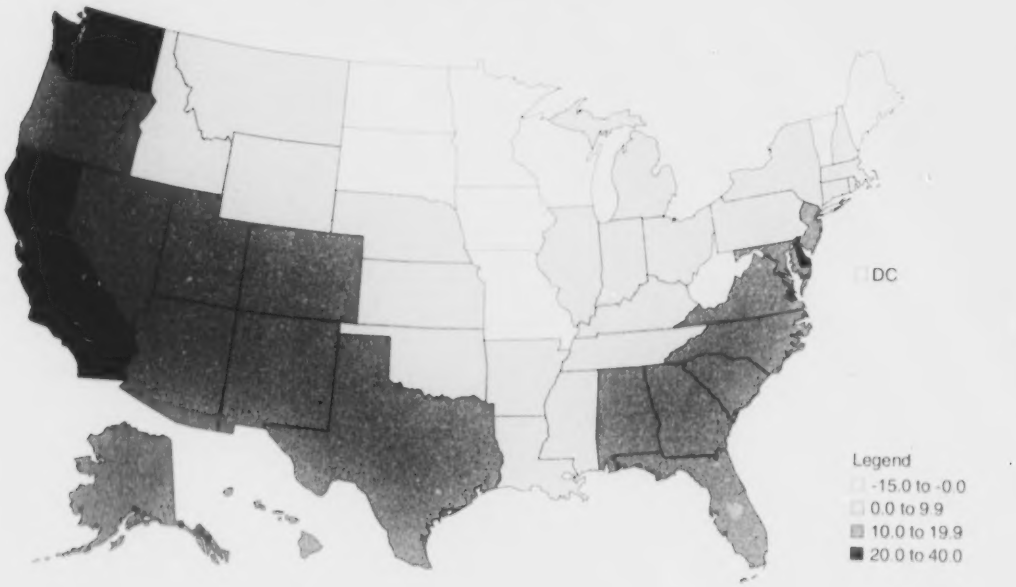

Figure 63
Percent change in public K-12 enrollment, by region: Fall 1994 to fall 2006

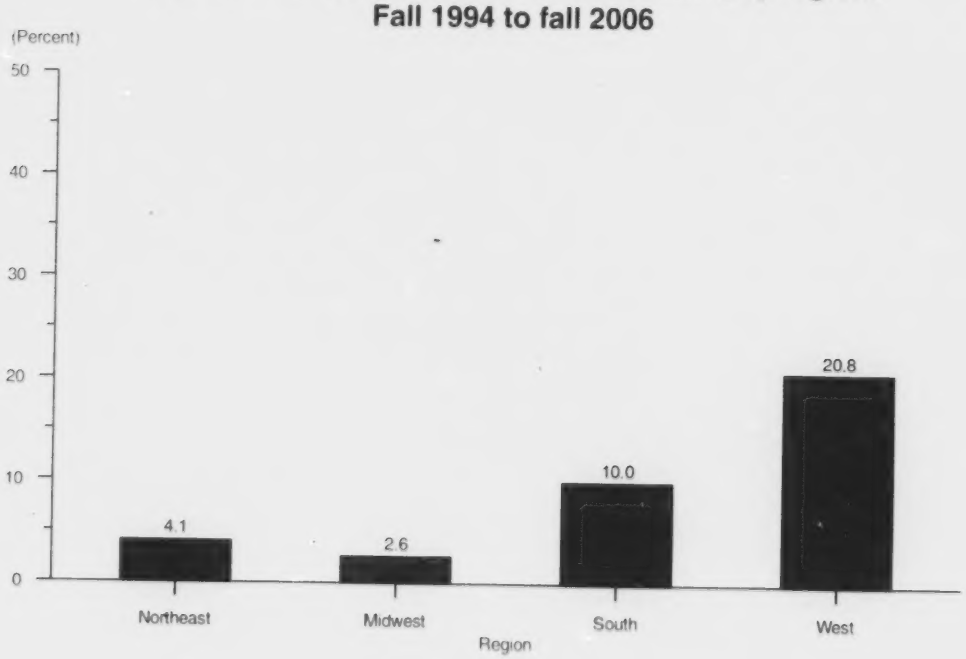

Figure 64
Percent change in grades K-8 enrollment in public schools, by state: Fall 1994 to fall 2006

Figure 65
Percent change in public K-8 enrollment, by region: Fall 1994 to fall 2006

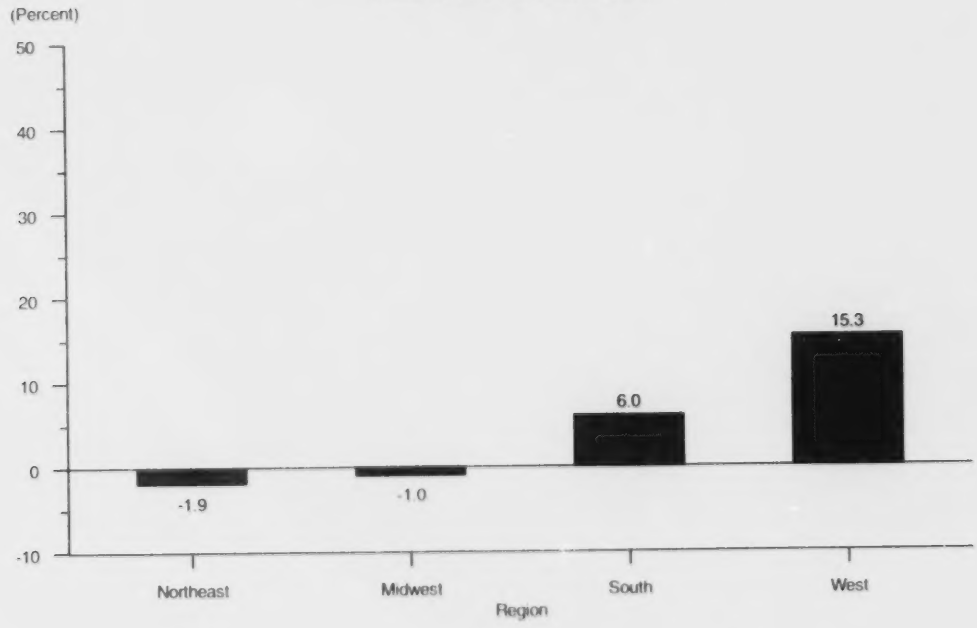

Figure 66
Percent change in grades 9-12 enrollment in public schools, by state: Fall 1994 to fall 2006

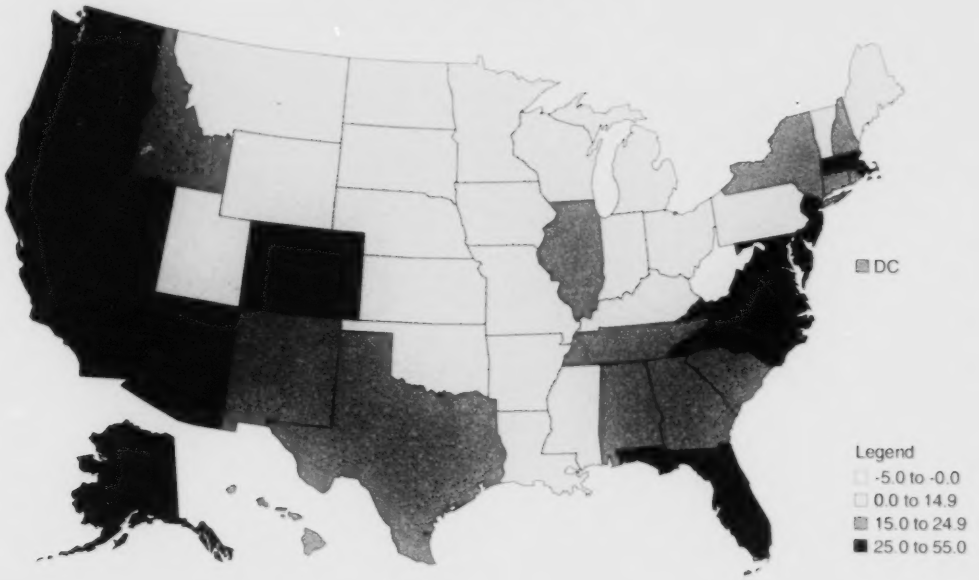

Figure 67
Percent change in public 9-12 enrollment, by region: Fall 1994 to fall 2006

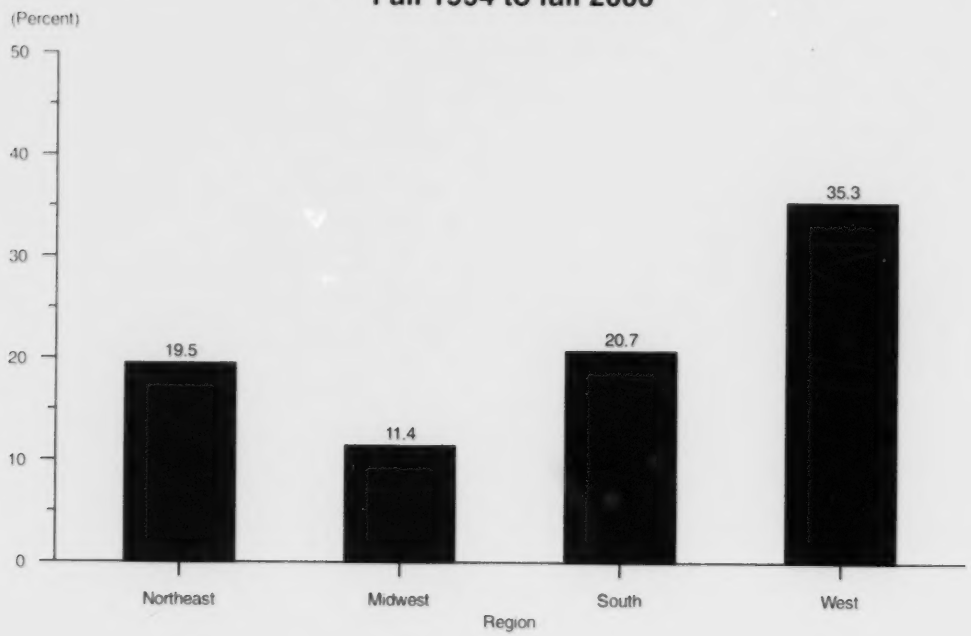

Table 45.—Enrollment in grades K–12 in public elementary and secondary schools, by region and state, with projections: Fall 1988 to fall 2006

(In thousands)

Region and state	Actual						Projected			
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
United States	40,189	40,543	41,217	42,047	42,816	40,044	44,230	45,076	45,885	46,524
Northeast	7,208	7,200	7,282	7,407	7,526	7,654	7,799	7,930	8,055	8,152
Connecticut	461	462	469	481	488	496	511	519	527	532
Maine	213	214	215	216	216	217	219	219	219	218
Massachusetts	823	826	834	846	860	878	899	915	930	943
New Hampshire	169	172	173	177	181	185	191	194	196	198
New Jersey	1,081	1,076	1,090	1,110	1,131	1,151	1,173	1,199	1,229	1,255
New York	2,574	2,566	2,598	2,644	2,690	2,734	2,771	2,817	2,862	2,895
Pennsylvania	1,660	1,655	1,668	1,693	1,718	1,744	1,781	1,809	1,832	1,848
Rhode Island	134	136	139	142	144	146	150	152	154	156
Vermont	93	95	96	97	99	103	104	105	106	106
Midwest	9,846	9,849	9,944	10,080	10,198	10,298	10,425	10,561	10,666	10,742
Illinois	1,795	1,797	1,821	1,848	1,874	1,893	1,907	1,937	1,966	1,989
Indiana	961	954	955	957	961	966	970	980	990	999
Iowa	478	478	484	491	495	499	500	505	507	508
Kansas	427	431	437	445	452	458	470	477	481	484
Michigan	1,583	1,577	1,584	1,594	1,604	1,599	1,632	1,657	1,674	1,686
Minnesota	727	740	756	774	794	810	828	841	849	854
Missouri	807	808	817	843	859	876	882	891	898	902
Nebraska	269	271	274	280	282	285	288	291	294	295
North Dakota	119	118	118	118	119	119	119	118	118	117
Ohio	1,779	1,764	1,771	1,784	1,795	1,807	1,817	1,832	1,846	1,857
South Dakota	127	127	129	132	135	143	146	148	150	151
Wisconsin	775	783	798	815	829	844	867	884	894	901
South	14,491	14,605	14,807	15,081	15,355	15,592	15,832	16,106	16,384	16,598
Alabama	725	724	722	722	731	734	733	743	753	762
Arkansas	436	435	436	439	441	444	447	451	454	456
Delaware	97	98	100	102	104	106	108	112	117	121
District of Columbia	85	81	81	81	82	81	81	79	78	76
Florida	1,721	1,790	1,862	1,932	1,981	2,041	2,109	2,173	2,235	2,279
Georgia	1,108	1,127	1,152	1,178	1,207	1,235	1,267	1,296	1,324	1,346
Kentucky	638	631	636	646	*655	655	656	660	662	664
Louisiana	787	783	785	794	798	801	793	794	795	794
Maryland	689	699	715	736	752	773	792	816	838	857
Mississippi	503	502	502	504	507	506	504	505	507	507
North Carolina	1,083	1,081	1,087	1,098	1,114	1,133	1,159	1,181	1,207	1,229
Oklahoma	580	579	579	588	597	604	610	615	619	622
South Carolina	616	616	622	627	640	644	647	658	668	676
Tennessee	822	820	825	834	854	867	880	892	905	916
Texas	3,284	3,329	3,383	3,464	3,542	3,608	3,663	3,725	3,791	3,839
Virginia	982	985	999	1,016	1,032	1,045	1,071	1,097	1,122	1,146
West Virginia	336	328	322	320	318	314	312	310	309	308
West	8,644	8,889	9,184	9,479	9,736	9,932	10,174	10,479	10,780	11,032
Alaska	106	109	114	119	122	126	129	133	137	140
Arizona	575	608	640	657	673	709	741	765	789	808
California	4,618	4,772	4,950	5,107	5,249	5,329	5,440	5,626	5,815	5,976
Colorado	560	563	574	593	613	625	641	655	670	683
Hawaii	167	169	172	175	177	180	193	200	205	209
Idaho	215	215	221	226	232	237	240	243	246	248
Montana	152	151	153	156	160	163	166	167	168	168
Nevada	176	187	201	212	223	236	250	260	270	279
New Mexico	292	296	302	309	316	322	332	341	349	355
Oregon	462	472	472	499	510	517	526	538	549	558
Utah	431	439	447	456	464	471	475	480	485	487
Washington	791	810	840	869	896	916	940	969	996	1,020
Wyoming	98	97	98	102	100	101	101	102	102	102

Table 45.—Enrollment in grades K–12 in public elementary and secondary schools, by region and state, with projections: Fall 1988 to fall 2006—Continued

(In thousands)

Region and state	Projected								
	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	46,988	47,365	47,656	47,891	48,102	48,234	48,365	48,497	48,528
Northeast	8,206	8,240	8,253	8,251	8,241	8,212	8,194	8,170	8,121
Connecticut	537	539	540	541	540	539	538	537	534
Maine	217	215	213	211	210	208	207	206	205
Massachusetts	948	949	948	945	941	935	928	921	911
New Hampshire	198	198	197	195	194	193	193	192	191
New Jersey	1,274	1,291	1,305	1,317	1,326	1,332	1,337	1,339	1,337
New York	2,915	2,928	2,935	2,936	2,934	2,925	2,921	2,914	2,897
Pennsylvania	1,855	1,857	1,854	1,846	1,837	1,824	1,815	1,805	1,791
Rhode Island	156	156	156	155	154	154	153	152	151
Vermont	106	106	105	105	104	103	103	103	102
Midwest	10,776	10,797	10,803	10,797	10,789	10,764	10,744	10,731	10,699
Illinois	2,002	2,014	2,024	2,032	2,037	2,038	2,041	2,044	2,042
Indiana	1,006	1,012	1,019	1,025	1,032	1,037	1,037	1,038	1,036
Iowa	505	503	500	497	495	492	489	487	485
Kansas	486	486	486	485	484	483	483	484	485
Michigan	1,699	1,709	1,715	1,720	1,724	1,724	1,725	1,725	1,723
Minnesota	855	853	849	843	837	829	824	821	816
Missouri	902	901	899	895	892	888	885	884	881
Nebraska	295	294	293	293	292	291	290	290	289
North Dakota	115	114	113	112	111	111	110	110	109
Ohio	1,859	1,861	1,861	1,861	1,861	1,857	1,850	1,844	1,833
South Dakota	150	150	148	147	146	144	144	144	144
Wisconsin	901	899	895	888	880	870	865	861	856
South	16,769	16,910	17,029	17,129	17,224	17,293	17,347	17,398	17,414
Alabama	773	785	797	809	820	830	836	841	844
Arkansas	458	459	461	462	464	465	465	466	466
Delaware	124	127	130	133	136	138	139	139	138
District of Columbia	74	73	72	71	71	72	72	72	72
Florida	2,309	2,328	2,338	2,341	2,339	2,332	2,334	2,336	2,333
Georgia	1,364	1,379	1,393	1,404	1,414	1,422	1,429	1,434	1,436
Kentucky	666	668	669	670	672	672	672	672	670
Louisiana	793	793	793	793	795	798	799	801	804
Maryland	874	888	899	908	915	921	926	929	931
Mississippi	505	504	503	503	504	505	505	506	506
North Carolina	1,249	1,267	1,282	1,296	1,307	1,315	1,318	1,320	1,316
Oklahoma	621	619	616	614	613	612	613	614	615
South Carolina	682	688	695	700	706	712	714	716	716
Tennessee	924	931	936	941	945	948	948	948	945
Texas	3,881	3,915	3,945	3,971	3,998	4,022	4,046	4,070	4,090
Virginia	1,165	1,181	1,195	1,208	1,218	1,226	1,230	1,233	1,232
West Virginia	306	305	304	304	304	304	304	303	302
West	11,238	11,418	11,572	11,713	11,848	11,964	12,080	12,199	12,294
Alaska	143	145	147	149	150	151	152	153	153
Arizona	820	828	833	835	834	831	835	838	840
California	6,112	6,234	6,343	6,447	6,549	6,642	6,724	6,808	6,878
Colorado	692	699	704	707	710	711	711	711	710
Hawaii	213	215	217	218	219	219	223	226	229
Idaho	250	252	253	255	257	258	260	262	263
Montana	169	168	168	168	167	167	167	168	168
Nevada	285	290	293	294	294	292	293	294	294
New Mexico	358	361	364	366	368	370	373	376	379
Oregon	566	574	580	586	592	597	601	606	610
Utah	490	493	497	502	508	514	520	527	532
Washington	1,039	1,056	1,071	1,085	1,097	1,108	1,115	1,123	1,129
Wyoming	101	102	102	102	103	104	105	107	108

NOTE: Includes most kindergarten and some nursery school enrollment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Surveys (This table was prepared September 1995.)

Table 46.—Percent change in grades K–12 enrollment in public schools, by region and state, with projections: Fall 1988 to fall 2006

Region and state	Actual	Projected		
	1988 to 1994	1994 to 2000	2000 to 2006	1994 to 2006
United States	10.1	7.7	1.8	9.7
Northeast	8.2	5.8	-1.6	4.1
Connecticut	10.9	5.8	-1.2	4.5
Maine	2.7	-2.4	-3.9	-6.3
Massachusetts	9.2	5.4	-3.9	1.3
New Hampshire	12.5	3.2	-2.8	0.3
New Jersey	8.5	11.3	2.5	14.0
New York	7.7	5.9	-1.3	4.6
Pennsylvania	7.3	4.1	-3.4	0.6
Rhode Island	12.2	3.9	-2.9	0.8
Vermont	11.7	0.8	-2.8	-2.0
Midwest	5.9	3.6	-1.0	2.6
Illinois	6.3	6.1	0.9	7.0
Indiana	0.9	5.1	1.7	6.9
Iowa	4.5	0.1	-3.2	-3.1
Kansas	10.2	3.3	-0.2	3.1
Michigan	3.1	5.1	0.4	5.5
Minnesota	13.8	2.6	-3.8	-1.3
Missouri	9.3	2.0	-2.0	0.0
Nebraska	6.8	2.0	-1.6	0.4
North Dakota	0.2	-5.3	-2.9	-8.1
Ohio	2.1	2.4	-1.5	0.9
South Dakota	14.8	1.9	-3.2	-1.3
Wisconsin	11.9	3.1	-4.4	-1.4
South	9.3	7.6	2.3	10.0
Alabama	1.2	8.6	5.9	15.1
Arkansas	2.5	3.1	1.0	4.1
Delaware	11.5	20.8	6.3	28.4
District of Columbia	-4.6	-11.1	-0.3	-11.4
Florida	22.6	10.9	-0.2	10.6
Georgia	14.3	10.0	3.1	13.4
Kentucky	3.0	2.0	0.1	2.1
Louisiana	0.8	0.0	1.4	1.4
Maryland	15.0	13.4	3.6	17.5
Mississippi	0.2	-0.2	0.4	0.3
North Carolina	7.0	10.7	2.6	13.6
Oklahoma	5.1	1.0	-0.2	0.8
South Carolina	5.1	7.3	3.1	10.6
Tennessee	7.1	6.4	0.9	7.4
Texas	11.5	7.7	3.7	11.7
Virginia	9.0	11.6	3.1	15.1
West Virginia	-7.2	-2.3	-0.8	-3.1
West	17.7	13.7	6.2	20.8
Alaska	21.0	14.2	4.1	18.9
Arizona	29.0	12.3	0.9	13.3
California	17.8	16.6	8.4	26.4
Colorado	14.5	9.8	0.9	10.7
Hawaii	15.4	12.3	5.7	18.7
Idaho	11.8	5.6	3.8	9.6
Montana	8.9	1.4	-0.1	1.3
Nevada	41.4	17.3	0.5	17.8
New Mexico	13.7	9.4	4.2	14.0
Oregon	13.9	10.3	5.2	16.1
Utah	10.1	4.7	7.1	12.1
Washington	18.9	14.0	5.4	20.1
Wyoming	3.3	0.8	6.1	6.9

NOTE: Includes most kindergarten and some nursery school enrollment.

SOURCE: US Department of Education, National Center for Education Statistics, Common Core of Data surveys. (This table was prepared September 1995.)

Table 47.—Enrollment in grades K–8 in public schools, by region and state, with projections: Fall 1988 to fall 2006

(In thousands)

Region and state	Actual						Projected			
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
United States	28,501	29,152	29,878	30,506	31,081	28,083	31,864	32,383	32,837	33,226
Northeast	4,989	5,077	5,189	5,293	5,387	5,486	5,585	5,675	5,751	5,812
Connecticut	332	338	347	355	362	369	378	384	389	393
Maine	149	152	155	157	156	157	157	157	156	154
Massachusetts	578	590	604	616	630	646	661	671	680	687
New Hampshire	120	124	126	130	133	136	140	141	141	141
New Jersey	755	766	784	801	818	844	858	880	902	923
New York	1,761	1,790	1,828	1,862	1,893	1,921	1,953	1,987	2,018	2,041
Pennsylvania	1,133	1,148	1,172	1,195	1,216	1,233	1,254	1,269	1,280	1,287
Rhode Island	95	98	102	104	106	107	109	111	111	112
Vermont	67	69	71	73	74	75	75	76	75	75
Midwest	6,894	6,997	7,130	7,245	7,312	7,357	7,377	7,445	7,486	7,525
Illinois	1,259	1,280	1,310	1,328	1,345	1,356	1,357	1,381	1,404	1,424
Indiana	668	671	676	676	677	679	675	681	686	693
Iowa	334	338	345	348	349	348	345	346	344	343
Kansas	307	314	320	325	328	330	334	336	335	334
Michigan	1,114	1,128	1,145	1,159	1,165	1,160	1,179	1,195	1,204	1,212
Minnesota	511	529	546	557	569	577	583	586	585	584
Missouri	568	576	588	612	622	632	629	633	636	635
Nebraska	191	194	198	201	202	203	203	203	203	203
North Dakota	85	85	85	85	85	84	83	82	80	79
Ohio	1,229	1,239	1,258	1,277	1,284	1,290	1,283	1,289	1,294	1,302
South Dakota	93	94	95	96	98	102	103	103	103	103
Wisconsin	535	549	566	580	588	596	603	610	612	612
South	10,413	10,617	10,859	11,068	11,285	11,441	11,537	11,706	11,867	12,002
Alabama	522	526	527	526	534	536	530	537	545	554
Arkansas	309	311	314	315	318	318	317	319	320	322
Delaware	69	71	73	75	76	77	78	81	84	87
District of Columbia	62	61	61	61	61	61	62	59	58	56
Florida	1,232	1,303	1,370	1,428	1,470	1,515	1,564	1,605	1,638	1,659
Georgia	808	828	849	868	892	910	927	945	963	978
Kentucky	452	452	459	466	470	467	464	466	468	470
Louisiana	581	582	586	591	591	587	576	576	574	573
Maryland	489	507	527	543	556	569	581	598	612	624
Mississippi	368	370	372	370	370	369	364	362	362	362
North Carolina	761	770	783	795	811	828	843	861	879	896
Oklahoma	414	421	425	432	439	441	441	442	441	439
South Carolina	438	444	452	456	467	467	466	473	480	487
Tennessee	586	590	598	605	621	630	634	642	651	659
Texas	2,392	2,443	2,511	2,575	2,634	2,681	2,699	2,729	2,764	2,790
Virginia	699	712	728	741	758	767	781	800	817	833
West Virginia	232	227	224	222	219	216	212	212	211	211
West	6,207	6,461	6,700	6,900	7,096	7,231	7,365	7,557	7,733	7,886
Alaska	79	82	85	89	92	94	95	98	100	102
Arizona	418	451	479	490	498	526	545	559	573	584
California	3,317	3,470	3,615	3,720	3,845	3,904	3,975	4,104	4,229	4,334
Colorado	400	408	420	436	451	460	469	475	481	486
Hawaii	120	123	123	127	129	132	139	143	146	148
Idaho	156	157	160	161	165	167	167	168	169	170
Montana	110	110	111	113	115	117	117	117	116	116
Nevada	127	137	150	158	165	175	184	190	196	200
New Mexico	200	203	208	213	217	226	230	233	236	240
Oregon	328	340	340	359	365	368	373	381	386	391
Utah	319	324	325	327	330	330	328	330	330	332
Washington	563	586	613	633	652	660	672	688	702	715
Wyoming	70	70	71	74	72	71	70	70	70	69

Table 47.—Enrollment in grades K–8 in public schools, by region and state, with projections: Fall 1988 to fall 2006—Continued

(In thousands)

Region and state	Projected								
	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	33,522	33,692	33,852	34,029	34,098	34,065	33,882	33,680	33,507
Northeast	5,838	5,835	5,822	5,806	5,767	5,710	5,634	5,555	5,477
Connecticut	395	395	394	393	390	387	382	378	374
Maine	152	150	147	146	144	143	141	140	139
Massachusetts	685	680	674	668	658	647	634	622	609
New Hampshire	140	138	136	135	133	132	130	129	127
New Jersey	938	948	956	962	962	959	950	940	929
New York	2,053	2,055	2,054	2,051	2,039	2,021	1,994	1,964	1,937
Pennsylvania	1,289	1,284	1,276	1,269	1,258	1,243	1,226	1,208	1,190
Rhode Island	112	111	110	109	108	106	105	103	101
Vermont	74	74	73	73	73	72	71	71	71
Midwest	7,546	7,539	7,534	7,539	7,527	7,491	7,427	7,367	7,305
Illinois	1,434	1,439	1,443	1,449	1,450	1,445	1,435	1,421	1,407
Indiana	700	707	712	719	723	724	719	714	707
Iowa	342	340	338	337	336	334	330	328	325
Kansas	335	334	334	335	335	335	334	334	334
Michigan	1,222	1,226	1,230	1,234	1,235	1,232	1,222	1,214	1,207
Minnesota	581	576	570	566	562	556	550	546	542
Missouri	634	630	626	623	620	616	610	606	602
Nebraska	202	201	201	201	200	200	198	197	196
North Dakota	77	76	75	74	74	74	73	73	73
Ohio	1,306	1,304	1,303	1,303	1,300	1,292	1,278	1,264	1,248
South Dakota	103	102	102	101	101	100	100	99	98
Wisconsin	610	605	599	595	590	584	578	572	567
South	12,118	12,192	12,268	12,352	12,396	12,405	12,350	12,284	12,231
Alabama	566	577	587	597	605	611	611	610	609
Arkansas	323	324	326	327	328	329	327	324	322
Delaware	90	93	95	98	100	102	101	100	99
District of Columbia	54	52	51	50	50	49	49	48	48
Florida	1,670	1,674	1,676	1,676	1,670	1,659	1,644	1,630	1,619
Georgia	993	1,004	1,014	1,022	1,026	1,027	1,022	1,016	1,013
Kentucky	474	472	475	479	480	480	477	474	471
Louisiana	572	570	569	572	574	576	576	575	575
Maryland	635	644	651	657	660	660	657	652	649
Mississippi	363	363	363	366	367	368	365	363	360
North Carolina	911	920	928	935	937	934	926	916	907
Oklahoma	437	434	432	432	432	431	429	427	426
South Carolina	493	498	502	507	510	510	507	503	500
Tennessee	665	668	670	673	674	671	665	659	652
Texas	2,818	2,836	2,856	2,881	2,899	2,914	2,919	2,920	2,924
Virginia	844	852	859	866	869	869	862	856	849
West Virginia	212	213	213	214	215	214	213	211	208
West	8,020	8,126	8,229	8,332	8,409	8,459	8,471	8,474	8,495
Alaska	104	105	106	107	108	108	108	108	108
Arizona	592	596	598	600	600	597	594	590	587
California	4,426	4,498	4,569	4,638	4,692	4,731	4,744	4,748	4,768
Colorado	489	491	493	494	495	494	492	489	486
Hawaii	150	152	155	157	158	160	161	162	164
Idaho	171	173	174	176	177	178	178	179	179
Montana	116	116	116	116	116	116	116	116	116
Nevada	203	205	206	206	206	204	203	202	202
New Mexico	243	246	249	252	255	257	257	257	257
Oregon	396	400	404	409	412	415	415	416	418
Utah	336	340	345	351	356	360	363	367	370
Washington	726	736	745	755	762	766	766	766	766
Wyoming	69	69	69	70	71	72	73	74	75

NOTE: Includes most kindergarten and some nursery school enrollment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Surveys. (This table was prepared September 1995.)

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Table 48.—Percent change in grades K–8 enrollment in public schools, by region and state, with projections: Fall 1988 to fall 2006

Region and state	Actual	Projected		
	1988 to 1994	1994 to 2000	2000 to 2006	1994 to 2006
United States	11.8	6.2	-1.0	5.2
Northeast	12.0	4.2	-5.9	-1.9
Connecticut	14.0	4.2	-5.2	-1.2
Maine	5.7	-6.4	-5.9	-11.9
Massachusetts	14.4	2.0	-9.8	-7.9
New Hampshire	16.5	-2.2	-6.7	-8.7
New Jersey	13.6	11.4	-2.8	8.3
New York	10.9	5.2	-5.7	-0.8
Pennsylvania	10.7	1.8	-6.7	-5.1
Rhode Island	14.9	0.3	-7.6	-7.4
Vermont	12.7	-2.3	-3.8	-6.1
Midwest	7.0	2.1	-3.0	-1.0
Illinois	7.8	6.3	-2.5	3.7
Indiana	1.1	5.6	-0.7	4.8
Iowa	3.2	-2.0	-4.0	-5.9
Kansas	9.0	0.0	-0.2	-0.3
Michigan	5.9	4.3	-1.9	2.3
Minnesota	14.0	-2.2	-5.0	-7.0
Missouri	10.7	-0.5	-3.8	-4.3
Nebraska	6.0	-1.0	-2.6	-3.5
North Dakota	-2.4	-9.9	-3.0	-12.6
Ohio	4.4	1.5	-4.2	-2.7
South Dakota	10.8	-0.8	-3.2	-4.0
Wisconsin	12.7	-0.6	-5.4	-6.0
South	10.8	6.3	-0.3	6.0
Alabama	1.5	10.8	3.8	15.0
Arkansas	2.6	2.6	-1.0	1.6
Delaware	12.6	23.1	4.1	28.2
District of Columbia	-0.9	-17.5	-5.5	-22.0
Florida	26.9	7.2	-3.4	3.6
Georgia	14.7	9.4	-0.1	9.3
Kentucky	2.6	2.5	-1.0	1.5
Louisiana	-0.8	-1.2	1.0	-0.2
Maryland	18.8	11.9	-0.3	11.6
Mississippi	-1.1	-0.1	-0.9	-1.0
North Carolina	10.8	10.1	-2.3	7.6
Oklahoma	6.7	-2.1	-1.4	-3.6
South Carolina	6.4	7.8	-0.4	7.4
Tennessee	8.2	5.7	-2.7	2.9
Texas	12.8	5.8	2.4	8.4
Virginia	11.7	10.1	-1.1	8.8
West Virginia	-8.5	0.5	-2.3	-1.8
West	18.7	11.7	3.2	15.3
Alaska	20.9	11.4	1.8	13.4
Arizona	30.6	9.7	-1.9	7.6
California	19.8	14.9	4.4	19.9
Colorado	17.2	5.1	-1.4	3.7
Hawaii	15.4	11.2	6.2	18.2
Idaho	7.6	4.3	2.7	7.1
Montana	7.2	-1.7	0.4	-1.3
Nevada	44.5	11.7	-1.9	9.6
New Mexico	14.7	8.5	3.1	11.9
Oregon	13.7	8.2	3.4	11.8
Utah	2.8	5.2	7.2	12.8
Washington	19.3	11.0	2.8	14.1
Wyoming	-0.1	-1.4	7.5	6.0

NOTE: Includes most kindergarten and some nursery school enrollment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data surveys. (This table was prepared September 1995.)

Table 49.—Enrollment in grades 9–12 in public schools, by region and state, with projections: Fall 1988 to fall 2006

(In thousands)

Region and state	Actual						Projected			
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
United States	11,688	11,390	11,338	11,541	11,735	11,961	12,366	12,693	13,049	13,299
Northeast	2,219	2,124	2,092	2,114	2,139	2,168	2,213	2,255	2,304	2,340
Connecticut	129	123	122	126	127	128	133	135	138	140
Maine	64	62	60	60	60	60	61	62	63	64
Massachusetts	246	235	230	230	230	232	239	244	250	256
New Hampshire	50	47	46	47	48	49	51	53	55	57
New Jersey	326	310	306	309	313	308	315	320	327	332
New York	813	776	770	782	796	813	818	830	844	855
Pennsylvania	527	507	496	498	502	511	528	540	553	561
Rhode Island	38	37	37	38	38	39	40	42	43	44
Vermont	27	26	25	24	25	28	29	30	30	31
Midwest	2,952	2,852	2,814	2,835	2,886	2,941	3,048	3,116	3,180	3,217
Illinois	536	517	512	520	529	537	550	556	563	565
Indiana	293	283	279	281	283	287	295	299	304	306
Iowa	144	140	139	143	146	151	155	159	163	164
Kansas	120	117	117	120	123	128	136	141	146	150
Michigan	469	449	440	435	439	439	454	462	470	474
Minnesota	216	211	211	217	224	233	245	255	265	271
Missouri	239	232	228	231	238	244	253	257	262	266
Nebraska	78	77	76	78	80	82	85	88	91	92
North Dakota	34	33	33	33	34	35	36	37	37	38
Ohio	549	525	514	506	511	517	533	543	552	555
South Dakota	34	34	34	35	37	41	43	45	47	47
Wisconsin	240	234	232	235	241	248	264	274	283	289
South	4,078	3,988	3,948	4,013	4,070	4,150	4,295	4,400	4,518	4,596
Alabama	203	198	195	196	196	199	204	206	208	208
Arkansas	127	124	123	123	124	127	130	132	134	134
Delaware	28	27	27	28	28	29	30	32	33	33
District of Columbia	22	21	19	20	21	19	19	19	20	20
Florida	489	486	492	505	512	526	546	569	597	620
Georgia	300	298	303	309	316	325	340	351	361	368
Kentucky	186	179	177	180	185	188	193	194	194	194
Louisiana	206	201	199	203	207	213	217	219	221	222
Maryland	200	192	188	193	196	203	211	218	226	233
Mississippi	136	133	131	134	137	137	141	143	145	144
North Carolina	322	311	304	303	304	305	316	320	328	333
Oklahoma	167	158	154	156	158	163	169	173	178	182
South Carolina	178	172	170	171	173	177	181	185	188	189
Tennessee	236	230	226	229	233	237	246	250	255	257
Texas	892	885	872	889	907	927	964	996	1,027	1,049
Virginia	283	273	270	275	274	278	290	296	305	314
West Virginia	104	100	98	99	99	99	99	98	98	96
West	2,437	2,427	2,484	2,579	2,640	2,701	2,809	2,922	3,047	3,146
Alaska	28	28	29	30	31	32	34	36	37	38
Arizona	157	156	161	167	176	183	196	206	216	224
California	1,301	1,302	1,336	1,387	1,404	1,424	1,465	1,522	1,586	1,642
Colorado	160	155	154	157	161	165	173	180	189	197
Hawaii	47	46	49	48	49	49	54	57	60	61
Idaho	59	58	61	64	67	70	73	75	77	78
Montana	43	41	42	43	45	46	48	50	51	52
Nevada	49	49	51	54	58	61	65	70	75	79
New Mexico	92	93	94	96	98	96	103	108	113	115
Oregon	134	132	132	139	145	148	152	157	162	167
Utah	112	115	122	129	134	141	146	150	155	155
Washington	228	224	227	237	245	256	269	281	294	305
Wyoming	27	27	27	28	29	29	31	32	32	33

Table 49.—Enrollment in grades 9–12 in public schools, by region and state, with projections: Fall 1988 to fall 2006—Continued

(In thousands)

Region and state	Projected								
	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	13,466	13,673	13,804	13,862	14,004	14,169	14,483	14,818	15,021
Northeast	2,368	2,405	2,431	2,445	2,474	2,502	2,560	2,615	2,644
Connecticut	142	144	146	148	150	152	155	159	161
Maine	65	66	66	66	65	65	66	66	66
Massachusetts	262	269	274	277	283	287	294	300	303
New Hampshire	58	60	60	60	61	62	63	63	64
New Jersey	336	343	349	355	364	373	386	399	408
New York	862	873	880	884	894	904	927	950	960
Pennsylvania	566	573	577	577	579	580	589	597	601
Rhode Island	45	46	46	46	47	47	48	49	50
Vermont	31	32	32	31	31	31	32	32	32
Midwest	3,229	3,258	3,269	3,258	3,263	3,273	3,316	3,364	3,394
Illinois	567	575	581	583	587	593	606	623	634
Indiana	305	306	306	306	308	313	318	324	329
Iowa	163	163	162	160	159	158	159	160	160
Kansas	151	152	152	150	149	148	149	151	151
Michigan	477	482	485	486	489	492	503	511	516
Minnesota	274	278	278	277	275	273	274	275	274
Missouri	268	271	273	272	272	272	275	278	280
Nebraska	93	93	93	92	91	92	92	93	93
North Dakota	38	38	38	37	37	37	37	37	37
Ohio	553	556	558	557	561	565	572	580	585
South Dakota	47	47	47	46	45	44	44	45	45
Wisconsin	291	295	295	293	290	286	287	288	289
South	4,650	4,718	4,761	4,777	4,828	4,889	4,998	5,114	5,183
Alabama	208	208	210	212	215	220	225	231	235
Arkansas	135	135	135	135	135	136	139	142	143
Delaware	34	34	35	35	36	36	37	38	39
District of Columbia	20	21	21	21	22	22	23	23	24
Florida	639	655	663	664	669	673	690	706	713
Georgia	371	375	379	382	388	395	407	418	424
Kentucky	192	196	194	192	192	192	195	198	199
Louisiana	222	223	223	221	221	221	223	226	229
Maryland	239	244	248	251	256	261	269	277	282
Mississippi	143	141	140	138	137	137	140	143	146
North Carolina	338	347	354	361	371	381	393	404	409
Oklahoma	184	185	184	182	181	181	184	187	189
South Carolina	189	191	193	193	197	201	207	212	216
Tennessee	259	263	266	268	272	276	283	289	293
Texas	1,063	1,079	1,089	1,091	1,099	1,108	1,127	1,150	1,165
Virginia	321	329	336	341	349	358	367	377	383
West Virginia	94	92	91	90	90	90	91	92	94
West	3,218	3,292	3,343	3,382	3,439	3,505	3,609	3,725	3,800
Alaska	39	40	41	42	42	43	44	45	45
Arizona	228	233	235	234	235	234	241	248	253
California	1,687	1,736	1,775	1,810	1,857	1,911	1,981	2,059	2,111
Colorado	203	208	211	213	215	217	219	222	224
Hawaii	62	63	63	62	61	60	62	64	65
Idaho	79	79	79	79	79	80	81	83	84
Montana	53	53	53	52	51	51	51	52	52
Nevada	82	85	87	88	89	88	90	92	92
New Mexico	115	115	114	114	113	113	116	119	122
Oregon	171	174	176	177	179	182	186	190	193
Utah	154	153	152	151	151	154	157	160	162
Washington	313	320	326	330	335	341	349	357	363
Wyoming	33	33	32	32	32	32	32	33	33

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Surveys. (This table was prepared September 1995.)

Table 50.—Percent change in grades 9–12 enrollment in public schools, by region and state, with projections: Fall 1988 to fall 2006

Region and state	Actual	Projected		
	1988 to 1994	1994 to 2000	2000 to 2006	1994 to 2006
United States	5.8	11.6	8.8	21.5
Northeast	-0.3	9.8	8.8	19.5
Connecticut	2.9	10.2	9.7	21.0
Maine	-4.2	7.6	0.5	8.2
Massachusetts	-2.9	14.7	10.7	26.9
New Hampshire	2.9	17.9	5.9	24.8
New Jersey	-3.4	10.9	17.0	29.7
New York	0.6	7.6	9.1	17.4
Pennsylvania	0.1	9.5	4.1	13.9
Rhode Island	5.7	13.6	8.3	23.0
Vermont	9.4	9.1	-0.4	8.6
Midwest	3.3	7.3	3.8	11.4
Illinois	2.6	5.7	9.2	15.4
Indiana	0.5	3.9	7.5	11.7
Iowa	7.5	4.6	-1.4	3.1
Kansas	13.3	11.6	-0.2	11.4
Michigan	-3.3	7.0	6.4	13.8
Minnesota	13.4	13.9	-1.4	12.2
Missouri	5.9	8.1	2.3	10.7
Nebraska	8.8	9.1	0.5	9.7
North Dakota	6.6	5.5	-2.8	2.5
Ohio	-2.9	4.7	4.8	9.7
South Dakota	25.6	8.2	-3.0	4.9
Wisconsin	10.3	11.7	-2.3	9.2
South	5.3	10.9	8.9	20.7
Alabama	0.4	2.9	12.0	15.3
Arkansas	2.2	4.2	5.8	10.3
Delaware	9.0	14.9	12.1	28.8
District of Columbia	-14.9	9.6	12.1	22.9
Florida	11.6	21.4	7.7	30.8
Georgia	13.2	11.5	11.8	24.6
Kentucky	3.8	0.6	2.7	3.4
Louisiana	5.4	3.1	2.5	5.7
Maryland	5.6	17.6	13.7	33.7
Mississippi	3.6	-0.4	3.9	3.5
North Carolina	-2.0	12.1	15.6	29.7
Oklahoma	1.1	9.3	2.7	12.2
South Carolina	2.0	6.1	12.0	18.9
Tennessee	4.4	8.3	9.9	19.0
Texas	8.1	13.0	7.0	20.9
Virginia	2.4	15.9	13.9	32.0
West Virginia	-4.5	-8.4	2.9	-5.8
West	15.3	19.0	13.7	35.3
Alaska	21.2	21.8	10.2	34.2
Arizona	24.6	19.7	8.0	29.3
California	12.6	21.1	18.9	44.1
Colorado	7.7	22.3	6.2	29.9
Hawaii	15.5	14.9	4.4	19.9
Idaho	22.9	8.6	6.2	15.3
Montana	13.3	8.7	-1.1	7.5
Nevada	33.3	33.0	6.0	41.0
New Mexico	11.5	11.2	6.7	18.7
Oregon	14.2	15.5	9.5	26.5
Utah	31.0	3.7	6.8	10.7
Washington	17.9	21.4	11.2	35.0
Wyoming	12.0	5.6	3.3	9.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data surveys. (This table was prepared September 1995.)

Chapter 9

Public High School Graduates

The projected increases in public high school enrollment between 1994 and 2006 will cause corresponding increases in the number of public high school graduates. The number of public high school graduates is expected to increase by 21 percent between 1993–94 and 2005–2006. This increase will be reflected in many states, with 46 states showing increases (table 51 and figure 68). Each region of the country is expected to reflect this increase in the number of public high school graduates. A significant increase is expected in the West and smaller increases are projected for the South, Midwest, and Northeast.

The number of public high school graduates in the Northeast is expected to increase 21 percent between 1993–94 and 2005–2006 (table 52 and figure 69). Increases are expected in all states in the region. These increases reverse the enrollment declines in most of the states in the late 1980s. Increases are expected in Connecticut (24 percent), Massachusetts (23 percent), New Hampshire (30 percent), New Jersey (16 percent), New York (20 percent), Pennsylvania (24 percent), Rhode Island (21 percent), and Vermont (42 percent). A smaller increase is projected for Maine (3 percent).

The number of public high school graduates in the Midwest is expected to increase by 13 percent between 1993–94 and 2005–2006. Increases are expected in Kansas (29 percent), Minnesota (30 percent), Missouri (18 percent), South Dakota (50 percent), and Wisconsin (32 percent). Other increases are projected in Illinois (12 percent) and Nebraska (10 percent). Smaller increases are projected for Indiana (2 percent), Iowa (5 percent), Michigan (8 percent), North Dakota (1 percent), and Ohio (4 percent). Most of the growth in the number of public high school graduates in the states will occur between 1993–94 and 1999–2000.

Between 1993–94 and 2005–2006, the number of public high school graduates in the South will increase by 18 percent. Significant increases are expected in Delaware (20 percent), Florida (41 percent), Georgia (29 percent), and Maryland (38 percent). Other increases are projected for North Carolina (14 percent), Oklahoma (19 percent), Texas (23 percent), and Virginia (19 percent). Smaller increases are projected for Alabama (2 percent), Arkansas (5 percent), South Carolina (6 percent), and Tennessee (11 percent). Despite an overall increase in the region, five Southern states are expected to have declines in the number of graduates. Decreases are expected in District of Columbia (10 percent), Kentucky (1 percent), Louisiana (2 percent), Mississippi (2 percent), and West Virginia (13 percent). Most of the growth in the number of public high school graduates in a majority of the states will occur between 1993–94 and 1999–2000.

The number of high school graduates in the West is expected to increase greatly, rising by 33 percent. Sizable increases are expected in Alaska (40 percent), Arizona (61 percent), Colorado (34 percent), Hawaii (77 percent), Nevada (93 percent), New Mexico (54 percent), and Washington (40 percent). Other increases are projected in California (27 percent), Idaho (24 percent), Montana (24 percent), Oregon (25 percent), and Utah (16 percent). Wyoming is expected to increase by only 2 percent. Most of the growth in the number of public high school graduates in a majority of the states will occur between 1993–94 and 1999–2000.

Figure 68
Percent change in number of public high school graduates, by state: 1993-94 to 2005-2006

Figure 69
Percent change in number of public high school graduates, by region: 1993-94 to 2005-2006

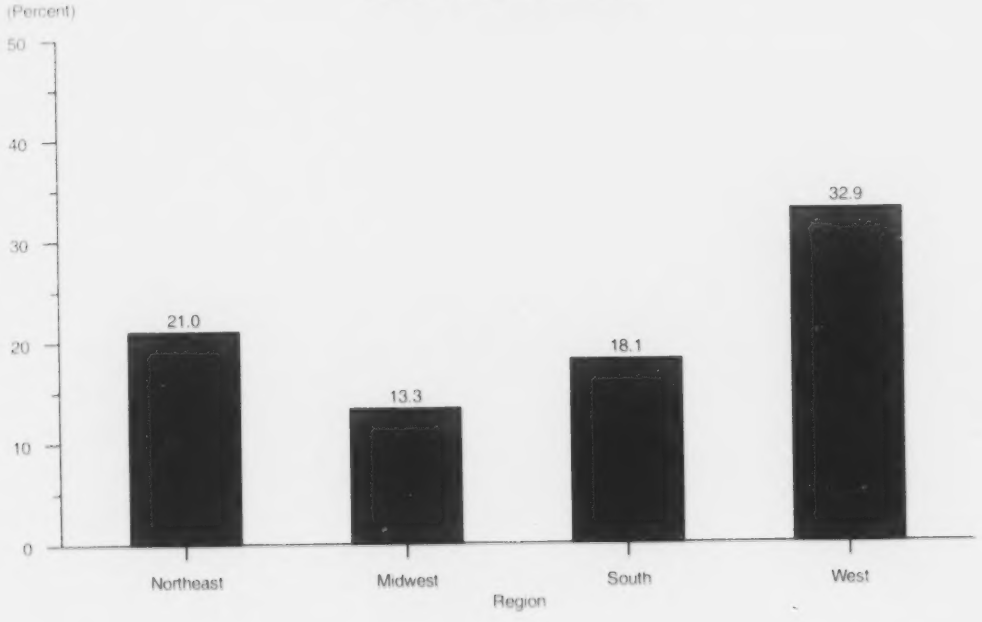

Table 51.—Number of high school graduates in public schools, by region and state, with projections: 1987–88 to 2005–2006

Region and state	Actual						Projected			
	1987–88	1988–89	1989–90	1990–91	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97
United States	2,500,191	2,458,800	2,320,337	2,234,893	2,226,016	2,233,241	2,247,208	2,299,700	2,320,940	2,342,670
Northeast	503,041	477,668	446,045	419,007	419,115	413,955	410,486	419,350	417,350	421,890
Connecticut	32,383	30,862	27,878	27,290	27,079	26,799	26,688	26,800	26,900	27,210
Maine	13,808	13,857	13,839	13,151	13,177	12,103	12,543	13,000	12,350	12,510
Massachusetts	59,515	57,328	55,941	50,216	50,317	48,321	47,939	48,260	47,920	48,390
New Hampshire	11,685	11,340	10,766	10,059	10,329	10,065	10,251	9,270	10,580	10,640
New Jersey	80,863	76,263	69,824	67,003	66,669	67,134	65,456	65,840	63,060	62,200
New York	165,379	154,580	143,318	133,562	134,573	132,963	132,538	135,500	137,420	139,190
Pennsylvania	124,376	118,921	110,527	104,770	103,881	103,715	102,138	107,230	104,770	107,180
Rhode Island	8,855	8,554	7,825	7,744	7,859	7,640	7,642	7,770	7,920	7,870
Vermont	6,177	5,963	6,127	5,212	5,231	5,215	5,291	5,680	6,430	6,710
Midwest	675,571	663,225	616,700	583,888	578,106	588,810	585,249	608,430	603,340	610,390
Illinois	119,090	116,660	108,119	103,329	102,742	103,628	102,894	105,830	106,850	105,680
Indiana	64,037	63,571	60,012	57,892	56,630	57,559	57,115	58,970	58,580	59,080
Iowa	35,218	34,294	31,796	28,593	29,224	30,677	30,890	31,670	32,240	32,830
Kansas	27,036	26,848	25,367	24,414	24,129	24,720	24,914	26,090	27,490	27,800
Michigan	106,151	101,784	93,807	88,234	87,756	85,302	84,800	88,500	83,540	85,090
Minnesota	54,645	53,122	49,087	46,474	46,228	48,002	48,420	50,900	51,270	53,430
Missouri	51,316	51,968	48,957	46,928	46,556	46,864	46,889	46,930	49,110	49,860
Nebraska	18,300	18,690	17,664	16,500	17,057	17,569	17,906	19,870	18,270	18,520
North Dakota	8,432	8,077	7,690	7,573	7,438	7,310	7,505	7,520	8,000	8,030
Ohio	124,503	125,036	114,513	107,484	104,522	109,200	105,763	110,070	106,060	106,270
South Dakota	8,415	8,181	7,650	7,127	7,261	7,952	7,943	8,580	9,030	9,640
Wisconsin	58,428	54,994	52,038	49,340	48,563	50,027	50,210	53,500	52,900	54,170
South	833,532	836,992	796,385	780,268	762,751	754,670	759,438	768,270	782,280	784,640
Alabama	43,799	43,437	40,485	39,042	38,680	36,007	36,839	37,090	37,500	37,350
Arkansas	27,776	27,920	26,475	25,668	25,845	25,655	25,571	25,780	25,800	25,980
Delaware	5,963	6,104	5,550	5,223	5,325	5,492	5,456	5,210	5,460	5,720
District of Columbia	3,882	3,565	3,626	3,369	3,385	3,136	3,125	3,120	2,990	3,040
Florida	89,206	90,759	88,934	87,419	93,674	89,428	93,108	90,310	94,790	96,080
Georgia	61,765	61,937	56,605	60,088	57,742	57,602	59,239	57,780	61,090	62,500
Kentucky	39,484	38,883	38,005	35,835	33,896	36,361	36,077	36,430	37,770	37,880
Louisiana	39,058	37,198	36,053	33,489	32,247	33,682	33,378	36,020	34,770	34,410
Maryland	47,175	45,791	41,566	39,014	39,720	39,523	38,610	41,410	41,600	41,470
Mississippi	27,896	24,241	25,182	23,665	22,912	23,597	23,364	23,120	23,830	23,630
North Carolina	67,836	69,970	64,782	62,792	61,157	60,460	59,259	59,700	59,190	58,420
Oklahoma	36,145	36,773	35,606	33,007	32,670	30,542	29,504	31,300	32,220	32,440
South Carolina	36,113	37,020	32,483	32,999	30,698	31,297	30,986	33,900	31,650	31,650
Tennessee	47,904	48,553	46,094	44,847	45,138	44,166	44,693	45,390	45,390	45,890
Texas	171,436	176,951	172,480	174,306	162,270	160,546	163,406	162,380	168,710	169,610
Virginia	65,688	65,004	60,605	58,441	57,338	56,948	56,451	58,530	58,820	57,840
West Virginia	22,406	22,886	21,854	21,064	20,054	20,228	20,372	20,800	20,700	20,750
West	488,047	480,915	461,207	451,730	466,044	475,806	492,035	503,650	517,970	525,750
Alaska	5,907	5,631	5,386	5,458	5,535	5,535	5,624	5,940	5,990	6,490
Arizona	29,777	31,919	32,103	31,282	31,264	31,747	32,921	31,190	35,610	37,000
California	249,617	244,629	236,291	234,164	244,594	249,320	260,457	262,000	264,940	266,960
Colorado	35,977	35,520	32,967	31,293	31,059	31,839	32,181	33,090	33,310	33,880
Hawaii	10,575	10,404	10,325	8,974	9,160	8,854	8,828	9,950	10,440	10,820
Idaho	12,425	12,520	11,971	11,961	12,734	12,974	13,509	13,900	14,660	15,200
Montana	10,311	10,490	9,370	9,013	9,046	9,389	9,467	9,970	10,220	10,550
Nevada	9,404	9,464	9,477	9,370	8,811	9,042	9,893	9,970	11,040	11,530
New Mexico	15,868	15,481	14,884	15,157	14,824	15,172	15,148	15,150	17,210	18,130
Oregon	28,058	26,903	25,473	24,597	25,305	26,301	26,995	27,500	28,710	29,290
Utah	22,226	22,934	21,196	22,219	23,513	24,197	25,423	29,180	29,450	28,250
Washington	51,754	48,941	45,941	42,514	44,381	45,262	45,410	49,560	50,070	51,190
Wyoming	6,148	6,079	5,823	5,728	5,818	6,174	6,179	6,250	6,320	6,470

Table 51.—Number of high school graduates in public schools, by region and state, with projections: 1987–88 to 2005–2006—Continued

Region and state	Projected								
	1997–98	1998–99	1999–2000	2000–2001	2001–2002	2002–2003	2003–2004	2004–2005	2005–2006
United States	2,452,070	2,536,250	2,577,090	2,630,840	2,655,440	2,673,280	2,739,060	2,736,240	2,710,060
Northeast	436,900	445,660	454,150	466,190	473,070	478,910	491,110	497,870	496,560
Connecticut	28,120	28,810	29,400	30,260	30,700	31,730	32,360	32,880	33,030
Maine	12,810	12,740	13,190	13,360	13,640	13,760	13,930	13,880	12,950
Massachusetts	49,380	50,770	51,980	53,860	54,540	56,360	58,100	58,160	58,810
New Hampshire	11,010	11,610	12,270	12,810	13,130	13,220	13,840	13,640	13,270
New Jersey	64,160	66,410	67,490	68,810	69,330	70,870	72,970	74,270	75,620
New York	144,300	145,650	147,100	151,330	153,600	153,760	157,480	159,040	159,680
Pennsylvania	111,830	114,240	116,810	119,450	121,380	121,960	125,310	128,850	126,490
Rhode Island	8,110	8,420	8,660	8,870	9,020	9,380	9,390	9,510	9,230
Vermont	7,180	7,020	7,260	7,440	7,740	7,890	7,720	7,640	7,490
Midwest	634,730	659,380	661,060	664,680	664,860	667,340	683,490	677,270	663,050
Illinois	110,640	114,750	111,340	110,330	109,300	114,060	117,300	116,450	115,390
Indiana	60,120	62,270	61,920	62,640	61,700	60,740	60,450	59,840	57,950
Iowa	33,960	35,490	35,760	35,440	35,500	34,420	34,970	34,180	32,560
Kansas	29,230	31,110	32,140	32,600	33,020	32,750	33,770	32,990	32,080
Michigan	87,360	89,140	89,670	90,450	90,400	91,400	94,050	92,620	92,020
Minnesota	56,190	59,270	60,910	62,490	62,720	63,400	65,010	65,030	63,140
Missouri	52,060	53,240	52,790	53,060	55,380	54,740	56,350	56,270	55,120
Nebraska	19,500	20,460	20,920	20,880	20,740	20,860	20,650	20,330	19,660
North Dakota	8,150	8,320	8,580	8,710	8,600	8,300	8,220	7,900	7,610
Ohio	109,440	113,400	114,000	113,550	111,540	110,210	113,890	112,620	109,470
South Dakota	10,600	11,080	11,340	11,700	11,590	11,820	12,070	12,100	11,910
Wisconsin	57,480	60,850	61,690	62,840	64,380	64,650	67,170	66,970	66,130
South	827,820	849,380	861,340	878,880	886,310	889,570	913,930	905,800	896,780
Alabama	38,700	39,690	39,030	38,690	38,230	38,020	37,360	37,120	37,540
Arkansas	27,800	27,720	27,710	27,870	27,870	27,550	27,780	27,140	26,750
Delaware	6,040	6,280	6,470	6,490	6,570	6,590	6,670	6,820	6,530
District of Columbia	3,020	2,940	2,950	3,010	2,900	2,910	2,860	2,920	2,820
Florida	103,170	106,880	112,000	118,910	123,600	126,990	131,180	131,200	131,310
Georgia	66,260	69,410	70,390	71,760	73,040	73,160	73,820	75,120	76,160
Kentucky	38,390	39,520	38,870	38,000	37,980	37,050	44,070	37,500	35,720
Louisiana	36,890	36,370	35,710	35,500	35,360	34,670	35,200	34,580	32,850
Maryland	44,410	45,950	47,360	49,140	50,360	51,010	51,870	52,180	53,300
Mississippi	25,040	25,590	25,590	25,450	24,770	24,300	23,940	23,590	22,880
North Carolina	61,320	62,000	61,900	63,780	63,690	64,110	67,010	66,960	67,800
Oklahoma	33,770	34,970	35,680	37,010	37,290	36,800	36,380	35,980	35,020
South Carolina	33,700	33,890	34,120	34,420	33,700	33,400	34,110	34,050	32,970
Tennessee	47,600	47,600	48,150	49,250	48,830	49,050	50,440	50,770	49,410
Texas	182,280	188,730	192,860	195,370	198,140	199,290	204,590	203,560	200,910
Virginia	59,100	61,220	62,630	64,060	64,460	66,180	68,350	68,010	67,030
West Virginia	20,330	20,620	19,930	20,180	19,520	18,480	18,330	18,310	17,790
West	552,620	581,830	600,540	621,090	631,200	637,460	650,530	655,300	653,670
Alaska	6,860	7,050	7,450	7,620	7,630	7,900	8,180	8,200	7,900
Arizona	39,670	42,520	44,220	46,800	48,830	49,720	51,880	53,200	53,060
California	276,580	291,580	300,660	309,050	314,500	318,980	326,910	328,820	330,000
Colorado	35,560	38,050	39,240	41,030	42,030	42,080	42,940	43,710	43,190
Hawaii	11,740	12,540	13,290	14,010	14,590	14,980	15,060	15,530	15,630
Idaho	16,150	16,330	16,610	17,190	17,140	17,180	16,730	16,170	16,730
Montana	10,960	11,440	11,900	12,070	12,000	12,180	12,280	12,210	11,740
Nevada	12,410	13,620	14,400	15,400	16,080	16,750	17,670	18,620	19,100
New Mexico	19,700	21,340	22,650	23,390	23,240	22,900	23,180	23,210	23,310
Oregon	30,470	30,710	31,670	33,320	33,770	33,960	34,680	34,510	33,710
Utah	31,380	32,340	31,960	32,550	31,370	30,840	30,330	30,140	29,610
Washington	54,160	57,210	59,430	61,510	62,930	62,960	63,710	64,350	63,370
Wyoming	6,980	7,110	7,060	7,150	7,090	7,010	6,970	6,640	6,330

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Surveys. (This table was prepared September 1995.)

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Table 52.—Percent change in number of public high school graduates, by region and state, with projections: 1987–88 to 2005–2006

Region and state	Actual	Projected		
	1987–88 to 1993–94	1993–94 to 1999–2000	1999–2000 to 2005–2006	1993–94 to 2005–2006
United States	-10.2	14.7	5.2	20.6
Northeast	-18.4	10.6	9.3	21.0
Connecticut	-17.6	10.2	12.3	23.7
Maine	-9.2	5.2	-1.8	3.3
Massachusetts	-19.5	8.4	13.1	22.7
New Hampshire	-12.3	19.7	8.1	29.5
New Jersey	-19.1	3.1	12.0	15.5
New York	-19.9	11.0	8.6	20.5
Pennsylvania	-17.9	14.4	8.3	23.8
Rhode Island	-13.7	13.3	6.7	20.8
Vermont	-14.3	37.3	3.1	41.5
Midwest	-13.4	13.0	0.3	13.3
Illinois	-13.6	8.2	3.6	12.1
Indiana	-10.8	8.4	-6.4	1.5
Iowa	-12.3	15.8	-8.9	5.4
Kansas	-7.8	29.0	-0.2	28.7
Michigan	-20.1	5.7	2.6	8.5
Minnesota	-11.4	25.8	3.7	30.4
Missouri	-8.6	12.6	4.4	17.6
Nebraska	-2.2	16.8	-6.0	9.8
North Dakota	-11.0	14.3	-11.3	1.4
Ohio	-15.1	7.8	-4.0	3.5
South Dakota	-5.6	42.8	5.0	50.0
Wisconsin	-14.1	22.9	7.2	31.7
South	-8.9	13.4	4.1	18.1
Alabama	-15.9	5.9	-3.8	1.9
Arkansas	-7.9	8.3	-3.4	4.6
Delaware	-8.5	18.6	0.9	19.7
District of Columbia	-19.5	-5.7	-4.1	-9.6
Florida	4.4	20.3	17.2	41.0
Georgia	-4.1	18.8	8.2	28.6
Kentucky	-8.6	7.7	-8.1	-1.0
Louisiana	-14.5	7.0	-8.0	-1.6
Maryland	-18.2	22.7	12.5	38.1
Mississippi	-16.2	9.5	-10.6	-2.1
North Carolina	-12.6	4.5	9.5	14.4
Oklahoma	-18.4	20.9	-1.9	18.7
South Carolina	-14.2	10.1	-3.4	6.4
Tennessee	-6.7	7.7	2.6	10.6
Texas	-4.7	18.0	4.2	23.0
Virginia	-14.1	10.9	7.0	18.7
West Virginia	-9.1	-2.2	-10.7	-12.7
West	0.8	22.1	8.8	32.9
Alaska	-4.8	32.4	6.1	40.4
Arizona	10.6	34.3	20.0	61.2
California	4.3	15.4	9.8	26.7
Colorado	-10.6	21.9	10.1	34.2
Hawaii	-16.5	50.5	17.6	77.1
Idaho	8.7	23.0	0.8	23.9
Montana	-8.2	25.7	-1.4	24.0
Nevada	5.2	45.6	32.6	93.1
New Mexico	-4.5	49.5	2.9	53.9
Oregon	-3.8	17.3	6.5	24.9
Utah	14.4	25.7	-7.4	16.5
Washington	-12.3	30.9	6.6	39.5
Wyoming	0.5	14.3	-10.4	2.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data surveys. (This table was prepared September 1995.)

Technical Appendixes

Appendix A

Projection Methodology

The general procedure for *Projections* was to express the variable to be projected as a percent of a "base" variable. These percents were then projected and applied to projections of the "base" variable. For example, the number of 18-year-old college students was expressed as a percent of the 18-year-old population for each year from 1972 through 1993. This percent was then projected through the year 2006 and applied to projections of the 18-year-old population from the Bureau of the Census.

Enrollment projections are based primarily on population projections. Projections of classroom teachers, high school graduates, earned degrees conferred, and expenditures are based primarily on enrollment projections.

Single exponential smoothing, double exponential smoothing, and multiple linear regression are the three major projection techniques used in this publication. Single exponential smoothing is used when the historical data have a basically horizontal pattern. On the other hand, double exponential smoothing is used when the time series is expected to change linearly with time. In general, exponential smoothing places more weight on recent observations than on earlier ones. The weights for observations decrease exponentially as one moves further into the past. As a result, the older data have less influence on projections. The rate at which the weights of older observations decrease is determined by the smoothing constant selected.

$$P = \alpha X_t + \alpha(1-\alpha)X_{t-1} + \alpha(1-\alpha)^2X_{t-2} + \alpha(1-\alpha)^3X_{t-3} + \ldots$$

Where:

P = projected constant

α = smoothing constant $(0 < \alpha < 1)$

X_t = observation for time t

This equation illustrates that the projection is a weighted average based on exponentially decreasing weights. For a high smoothing constant, weights for earlier observations decrease rapidly. For a low smoothing constant, decreases are more moderate. Projections of enrollments and public high school graduates are based on a smoothing constant of $\alpha = 0.4$.

In general, the projections in this publication are based on fairly high smoothing constants. The farther apart the observations are spaced in time, it is more likely that there are changes in the underlying social, political, and economic structure. Since the observations are on an annual basis, major shifts in the underlying process are more likely in the time span of just a few observations than if the observations were available on a monthly or weekly basis. As a result, the underlying process tends to be unstable from one observation to the next. Another reason for using high smoothing constants for some time series is that most of the observations are fairly accurate, because most observations are population values rather than sample estimates. Therefore, large shifts tend to indicate actual changes in the process rather than noise in the data.

Multiple linear regression was also used in making projections, primarily in the areas of teachers, earned degrees, and expenditures. This technique was used when it was believed that a strong causal relationship existed between the variable being projected (the dependent variable) and independent causal variables. However, this technique was used only when accurate data and reliable projections of the independent variables were available.

The functional form primarily used was the multiplicative model. When used with two independent variables, this model takes the form:

$$Y = aX_1^{b_1}X_2^{b_2}$$

This equation can easily be transformed into the linear form by taking the natural log(ln) of both sides of the equation:

$$\ln Y = \ln(a) + b_1 \ln X_1 + b_2 \ln X_2$$

The multiplicative model has a number of advantages; it is a reasonable way to represent human behavior. Constant elasticities are assumed; this says that a 1 percent change in ln X will lead to a given percent change in ln Y. This percent change is equal to b_1. And it lends itself easily to "a priori" analysis because the researcher does not have to worry about units of measurement when specifying relationships. In fact, the multiplicative model is considered the standard in economic problems. For additional information, see *Long-Range Forecasting: From Crystal Ball to Computer* by J. Scott Armstrong (John Wiley and Sons, 1978, pp. 180–181).

Caveats

Because projections are subject to errors from many sources, alternative projections are shown for some statis-

tical series. These alternatives are not statistical confidence intervals, but instead represent judgments made by the authors as to reasonable upper and lower bounds for each projected series. Alternative projections were developed for higher education enrollment, classroom teachers, earned degrees conferred, and expenditures in public elementary and secondary schools and institutions of higher education.

Assumptions

All projections are based on underlying assumptions, and these assumptions determine projection results to a large extent. It is important that users of projections understand the assumptions to determine the acceptability of projected time series for their purposes. In each chapter, there are descriptions of the primary assumptions upon which the projections of time series are based.

For most projections, low, middle, and high alternatives are shown. These alternatives reveal the level of uncertainty involved in making projections, and they also point out the sensitivity of projections to the assumptions on which they are based.

Many of the projections in this publication are demographically based. Bureau of the Census middle series projections of the population by age were used. These middle series population projections are based on the 1990 census. The future fertility rate assumption, which determines projections of the number of births, is the key assumption in making population projections. The middle series population projections assume an ultimate complete cohort fertility rate of 2.09 births per woman by the year 2006 and a net immigration of 820,000 per year. This assumption plays a major role in determining population projections for the age groups enrolled in nursery school, kindergarten, and elementary grades. The effects of the fertility rate assumption are more pronounced toward the end of the projection period.

For enrollments in secondary grades and college, the fertility assumption is of no consequence, since all students enrolled at these levels were already born when the population projections were made. For projections of enrollments in elementary schools, only middle series population projections were considered. Projections of high school graduates are based on projections of the number of high school graduates expressed as a percent of grade 12 enrollment. Projections of associate, bachelor's, master's, doctor's, and first-professional degrees are based on projections of college-age populations and higher education enrollment, by sex, attendance status and level enrolled by student, and by type of institution. Many of the projections of classroom teachers and expenditures of public elementary and secondary schools and institutions of higher education are based on projections of disposable income per capita and various revenue measures of state and local governments. Disposable income per capita projections were obtained from DRI/McGraw-Hill. Therefore, the many assumptions made in projecting disposable income per capita also apply to those projections based on projections of disposable income per capita.

A1. Enrollment

National

Enrollment projections were based on projected enrollment rates, by age and sex, which were applied to population projections by age and sex developed by the Bureau of the Census. These enrollment rates were projected by taking into account the most recent trends, as well as the effects of economic conditions and demographic changes on a person's decision to enter college. The enrollment rates were then used in an interactive forecasting model (IFMOD), which consists of age-specific rates by sex and by enrollment levels (nursery school through college). The model has 5 stages. See figure 70.

The first stage of IFMOD is an age-specific enrollment model in which enrollment rates are projected and applied to age-specific population projections. This stage, which is used separately for each sex, includes the following categories: (1) nursery and kindergarten, (2) elementary grades 1–8, (3) secondary grades 9–12, (4) full-time college enrollment, and (5) part-time college enrollment. For each of these enrollment categories, enrollment rates were projected by individual ages 3 through 24 and for the age groups 25 to 29, 30 to 34, and 35 years and over.

Enrollments by age and age groups from the Bureau of the Census were adjusted to NCES totals to compute enrollment rates for 1972 through 1993. Different assumptions were made to produce low, middle, and high alternative projections of enrollment rates to the year 2006.

Elementary Grades 1–8

Projections of elementary enrollment rates were considered for ages 5 through 21. Elementary enrollments are negligible for the remaining ages. Because most elementary enrollment rates have been fluctuating at levels close to 100 percent from 1972 to 1993, alternative enrollment rate projections were not computed. The only set of enrollment rate projections computed was based on the assumption that rates will remain constant through the year 2006 (table A1.1). Several of the rates in table A1.1 exceed 100 percent, as a result of several factors. The enrollment data by age were prorated to agree with NCES totals. The Bureau of the Census does not revise enrollment estimates by age, but population estimates are revised regularly.

Secondary Grades 9–12

Projections of secondary enrollment rates were considered for ages 12 through 34. Secondary enrollments are negligible for the remaining ages. Secondary enrollment rates have fluctuated within a narrow range from 1972 to 1993. Therefore, alternative enrollment rate projections were not calculated. The only set of projections computed was based on constant enrollment rates (table A1.2).

College Full-Time and Part-Time Enrollment

Projections of full-time and part-time college enrollments were considered only for ages 16 and over. (College enrollment is negligible for earlier ages.) Three alternative projections were made using various assumptions. Table A1.3 shows enrollment rates for 1993 and low, middle, and high alternative projected enrollment rates for 2001 and 2006.

Table A1.4 shows the equations used to project enrollment rates for men by attendance status. Table A1.5 shows the equations used to project age-specific enrollment rates for women by attendance status.

Enrollment in Public Elementary and Secondary Schools, by Grade Group and Organizational Level

The third stage of IFMOD projects public enrollment in elementary and secondary schools by grade group and by organizational level. Public enrollments by age were based on enrollment rate projections for nursery and kindergarten, grade 1, elementary ungraded and special, secondary ungraded and special, and postgraduate enrollment. Grade retention rate projections were used for grades 2 through 12. Table A1.6 shows the public school enrollment rates and table A1.7 shows the public grade-retention rates for 1993 and projections for 2001 and 2006. The projected rates in tables A1.6 and A1.7 were used to compute the projections of enrollments in elementary and secondary schools, by grade, shown in table 1.

College Enrollment, by Sex, Attendance Status, and Level Enrolled; and by Type and Control of Institution

The fourth stage of IFMOD projects enrollments in institutions of higher education, by sex, attendance status, and level enrolled by student and by type and control of institution. For each age group, the percent that enrollment by age, attendance status, level enrolled, and by type of institution was of total enrollment was projected. These projections are shown in tables A1.8 and A1.9, along with actual values for 1993. For all projections, it was assumed that there was no enrollment in 2-year

institutions at the postbaccalaureate level (graduate and first-professional).

The projected rates in tables A1.8 and A1.9 were then adjusted to agree with the projected age-specific enrollment rates in the first stage of IFMOD. The adjusted rates were then applied to the projected enrollments by age group, sex, and attendance status from the first stage of IFMOD to obtain projections by age group, sex, attendance status, level enrolled, and type of institution.

For each enrollment category—sex, attendance status, level enrolled, and type of institution—the percent that public enrollment was of total enrollment was projected. These projections are shown in table A1.10, along with actual percent for 1993 and projections for 2001 and 2006. The projected rates shown were then applied to the projected enrollments in each enrollment category to obtain projections by control of institution.

For each enrollment category by sex and enrollment level, and by type and control of institution, the percent that graduate enrollment was of postbaccalaureate enrollment was projected. Actual rates for 1993 and projections for 2001 and 2006 are shown in table A1.11. The projected rates in table A1.11 were then applied to projections of postbaccalaureate enrollment to obtain graduate and first-professional enrollment projections by sex and attendance status, and by type and control of institution.

Full-Time-Equivalent Enrollment, by Type and Control of Institution and by Level Enrolled

The fifth stage of IFMOD projects full-time-equivalent enrollment, by type and control of institution and by level enrolled. For each enrollment category by level enrolled and by type and control of institution, the percent that the full-time-equivalent of part-time enrollment was of part-time enrollment was projected. Actual percents for 1993 and projections for 2001 and 2006 are shown in table A1.12.

These projected percents were applied to projections of enrollment by level enrolled and by type and control of institution from the fourth stage of IFMOD. The projections of the full-time-equivalent of part-time enrollment were added to projections of full-time enrollment (from the previous stage) to obtain projections of full-time-equivalent enrollment.

Projection Accuracy

An analysis of projection errors from the past 12 editions of *Projections of Education Statistics* indicates that the mean absolute percentage errors (MAPEs) for lead times of 1, 2, 5, and 10 years out for projections of public school enrollment in grades K–12 were 0.4, 0.7, 1.4, and 2.4 percent, respectively. For the 1-year-out prediction, this means that one would expect the projection to be within 0.4 percent of the actual value, on the average. For projections of public school enrollment in grades K–8, the MAPEs for lead times of 1, 2, 5, and 10 years were 0.6, 0.9, 1.2, and 3.6 percent, respectively, while those for projections of public school enrollment in grades 9–12 were 0.6, 0.5, 1.0, and 3.8 percent for the same lead times.

For projections of enrollment in higher education, an analysis of projection errors based on the past nine editions of *Projections of Education Statistics* indicates that the MAPEs for lead times of 1, 2, and 5 years were 2.1, 3.2, and 7.1 percent, respectively. For the 1-year-out prediction, this means that one would expect the projection to be within 2.1 percent of the actual value, on the average.

Basic Methodology

The notation and equations that follow describe the basic models used to project public elementary and secondary enrollment.

Public Elementary and Secondary Enrollment

Let:

i = Subscript denoting age

j = Subcript denoting grade

t = Subscript denoting time

K_t = Enrollment at the nursery and kindergarten level

G_{jt} = Enrollment in grade j

G_{1t} = Enrollment in grade 1

E_t = Enrollment in elementary special and ungraded programs

S_t = Enrollment in secondary special and ungraded programs

PG_t = Enrollment in postgraduate programs in secondary schools

P_{it} = Population age i

RK_t = Enrollment rate for nursery and kindergarten

RG_{1t} = Enrollment rate for grade 1

RE_t = Enrollment rate for elementary special and ungraded programs

RS_t = Enrollment rate for secondary special and ungraded programs

RPG_t = Enrollment rate for postgraduate programs

EG_t = Total enrollment in elementary grades (K–8)

SG_t = Total enrollment in secondary grades (9–12)

R_{jt} = Retention rate for grade j: the proportion that enrollment in grade j in year t is of enrollment in grade j–1 in year t–1.

Then:

$$EG_t = K_t + E_t + \sum_{j=1}^{8} G_{jt}$$

$$SG_t = S_t + PG_t + \sum_{j=9}^{12} G_{jt}$$

Where:

$K_t = RK_t(P_{5t})$

$G_{jt} = R_{jt}(G_{j-1,t-1})$

$$E_t = RE_t\left(\sum_{i=5}^{13} P_{it}\right)$$

$G_{1t} = RG_{1t}(P_{6t})$

$$S_t = RS_t\left(\sum_{i=14}^{17} P_{it}\right)$$

$PG_t = RPG_t(P_{18t})$

Higher Education Enrollment

For institutions of higher education, projections were computed separately by sex and attendance status of student. The notation and equations are:

Let:

i = Subscript denoting age except:

i = 25: ages 25–29

i = 26: ages 30–34

i = 27: ages 35 and over for enrollment (35–44 for population)

t = Subscript denoting year

E_{it} = Enrollment of students age i

P_{it} = Population age i

R_{it} = Enrollment rate for students age i

T_{it} = Total enrollment for particular subset of students: full-time men, full-time women, part-time men, part-time women

Then:

$$T_{it} = \sum_{i=16}^{27} E_{it}$$

Where:

$E_{it} = R_{it}(P_{it})$

Methodological Tables

The tables in this section give the rates used to calculate projections of enrollments, basic assumptions underlying enrollment projections (table A1.13), and methods used to estimate values for which data are not available (table A1.14).

Private School Enrollment

Projections of private school enrollment were derived in the following manner. From 1970 to 1993, the ratio of private school enrollment to public school enrollment was calculated by grade level. These ratios were projected using single exponential smoothing, yielding a constant value over the projection period. This constant was then applied to projections of public school enrollment by grade level to yield projections of private school enrollment. This method assumes that the future pattern in the trend of private school enrollment will be the same as that in public school enrollment. The reader is cautioned that a number of factors could alter the assumptions of constant ratios over the projection period.

State-Level

This edition contains projected trends in elementary and secondary enrollment by grade level in public schools from 1995 to the year 2006. This is the fifth report on state-level projections for public school elementary and secondary education statistics.

Public school enrollment data from the National Center for Education Statistics' Common Core of Data survey for 1970 to 1993 were used to develop these projections. This survey does not collect data on enrollment for private schools. In addition, population estimates for 1970 to 1994 and population projections for 1995 to 2006 from the U.S. Department of Commerce, Bureau of the Census were used to develop the projections.

Table A1.15 describes the number of years, projection methods, and smoothing constants used to project enrollments in public schools. Also included in table A1.15 is the procedure for choosing the different smoothing constants for the time series models.

The grade retention method and the enrollment rate method were used together to project public elementary and secondary school enrollment by state. The grade retention method starts with 6-year-olds entering first grade and then follows their progress through public elementary and secondary schools. The method requires calculating the ratio of the number of children in one year who "survive" the year and enroll in the next grade the following year. The enrollment rate method expresses the enrollment of a particular age group as a percent of the population for the same age group. The projections produced from these two methods were combined to yield a composite projection of enrollment.

First, projections of enrollment in public elementary and secondary schools by state were developed using primarily the grade retention method. Kindergarten and first grade enrollments are based on projected enrollment rates of 5- and 6-year-olds. These projected enrollment rates are applied to population projections of 5- and 6-year-olds developed by the Bureau of the Census.

Enrollments in grades 2 through 12 are based on projected grade retention rates. These projected rates are then applied to the current enrollment by grade to yield grade-by-grade projections for future years. Enrollment rates of 5- and 6-year-olds and retention rates are projected using single exponential smoothing. Elementary ungraded and special enrollments and secondary ungraded and special enrollments are projected to remain constant at their 1993 levels. To obtain projections of total enrollment, projections of enrollments for the individual grades (kindergarten through 12) and ungraded and special classes were summed.

Second, projections of enrollments in public elementary and secondary schools by state were developed using the enrollment rate method. Enrollment in grades K–8 was expressed as a percent of the 5- to 13-year-old population for 1970 to 1993. Similarly, enrollment in grades 9–12 was expressed as a percent of the 14- to 17-year-old population. These percents were then projected using single exponential smoothing and applied to projections of the 5- to 13-year-old and 14- to 17-year-old populations developed by the Bureau of the Census.

The enrollment rate and grade retention methods assume that past trends in factors affecting public school enrollments will continue over the projection period. This assumption implies that all factors influencing enrollments will display future patterns consistent with past patterns. Therefore, this method has limitations when applied to states with unusual changes in migration rates. This method implicitly includes the net effect of such factors as migration, dropouts, deaths, nonpromotion, and transfers to and from private schools.

Combining Enrollment Projections

Projections of public school enrollment are based on the grade retention and enrollment rate methods. Empirical research on national models suggests that the enrollment rate method is superior to the grade retention method as the lead time of the projection increases. For longer lead times, the mean absolute percentage errors of the projections of national public school enrollment based on the enrollment rate method are smaller than those based on the grade retention method. It is reasoned that because the projections based on the enrollment rate method depend on population projections, they reflect long-term shifts in state migration patterns as projected by the Bureau of the Census. On the other hand, the projections based on the grade retention method reflect the net effects of state in- and out-migration for the short term.

For a particular year, the projections of enrollments developed using the grade retention and enrollment rate methods were combined using a simple linear combination of the projections as follows:

$$E = bX_1 + (1-b)X_2$$

Where:

E = combined enrollment projection

X_1 = projection based on the grade retention rate

X_2 = projection based on the enrollment rate method

b = weight

Here, b is an adaptive parameter that changes in time to give the most weight to longer lead times for the most successful of the two projection methods, the enrollment rate. Table A1.16 presents the weights used to combine the two methods.

The sum of the weights b and 1-b is constrained to sum to 1. Empirical evidence suggests that the enrollment rate method is superior to the grade retention method for long lead times and that the grade retention method is more accurate for short lead times.

Adjustment to National Projections

The sum of the projections of state enrollments was adjusted to add to the national projections of public school K–12, K–8, and 9–12 enrollments shown in table 1. For details on the methods used to develop the national projections for this statistic, see the section on national enrollment projections in this appendix.

Figure 70

General structure and methodology of the Interactive Forecasting Model (IFMOD)

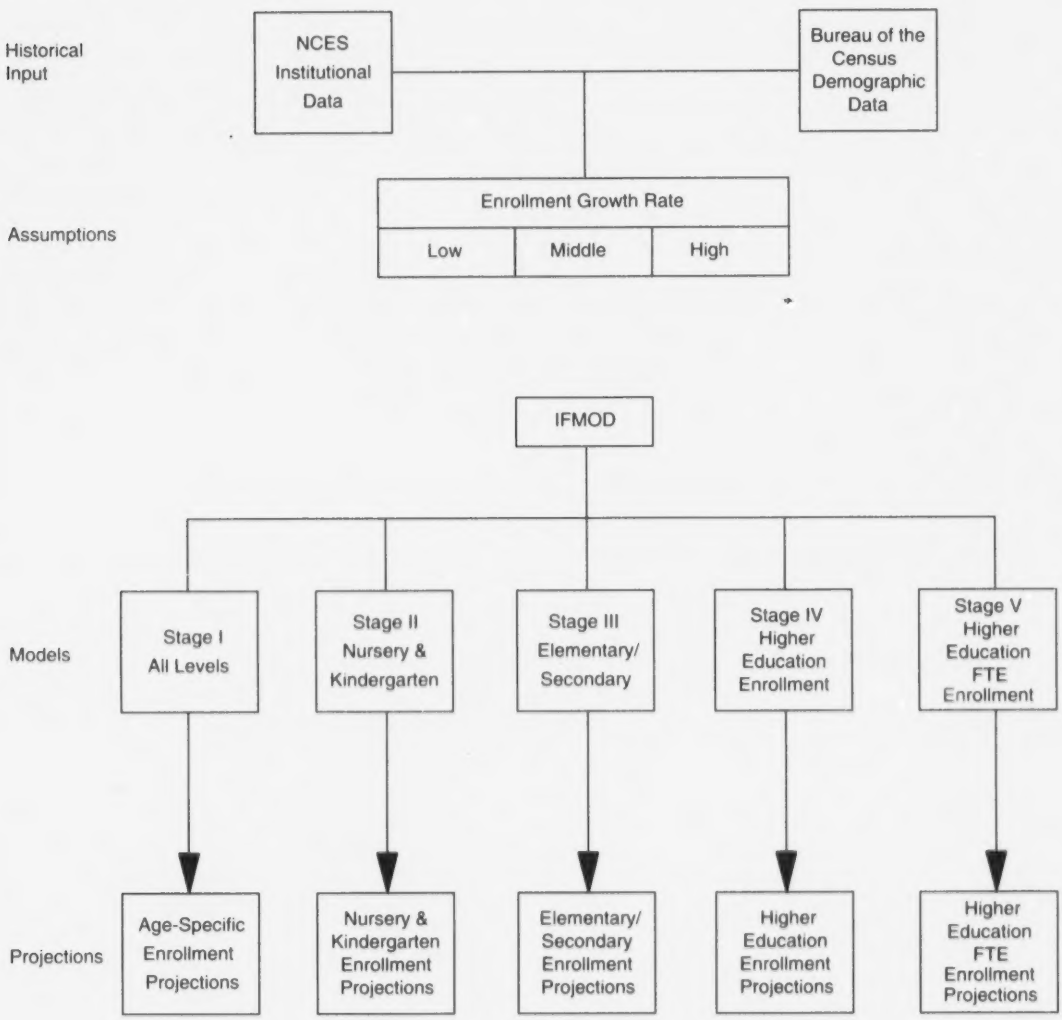

Table A1.1.—Elementary enrollment rates, by age and sex

Age	Boys		Girls	
	1993	1995–2006	1993	1995–2006
5	6.0	5.6	6.8	6.2
6	84.4	84.7	90.8	89.5
7	104.6	104.4	104.3	104.4
8	106.9	106.5	105.4	106.7
9	101.4	101.0	102.0	100.7
10	100.4	100.6	101.1	100.6
11	101.5	94.2	105.0	104.7
12	103.1	108.8	95.4	100.1
13	96.1	100.3	101.4	98.1
14	36.2	38.3	26.8	25.6
15	6.4	6.7	4.4	4.3
16	0.8	0.7	0.8	0.4
17	0.5	0.2	0.1	0.0
18	0.1	0.0	0.0	0.1

Table A1.2.—Secondary enrollment rates, by age and sex

Age	Boys		Girls	
	1993	1995–2006	1993	1995–2006
12	0.5	0.4	0.6	0.4
13	4.5	4.7	5.8	6.2
14	62.4	62.0	72.8	73.5
15	90.5	90.0	91.3	91.8
16	91.5	92.1	93.3	93.4
17	84.2	82.4	80.8	80.3
18	31.2	29.8	19.1	18.8
19	8.0	7.1	5.6	4.8
20	1.7	1.5	0.8	1.2
21	0.7	0.7	0.6	0.7
22	0.5	0.5	0.4	0.4
23	0.1	0.3	0.3	0.5
24	0.7	0.5	0.5	0.5
25–29	0.3	0.2	0.4	0.4
30–34	0.2	0.2	0.4	0.3

Table A1.3.—College enrollment rates, by age, sex, and attendance status, with alternative projections

Age, sex, and attendance status	1993	Low alternative		Middle alternative		High alternative	
		2001	2006	2001	2006	2001	2006
Men							
Full-time:							
16	0.1	0.1	0.1	0.1	0.1	0.1	0.1
17	2.9	2.8	2.8	3.2	3.3	3.3	3.5
18	28.7	28.7	28.7	30.9	31.8	31.2	32.6
19	31.9	31.9	31.9	34.7	35.7	35.2	36.7
20	26.9	26.9	26.9	28.8	29.6	28.9	30.3
21	25.9	25.9	25.9	28.2	28.9	28.5	29.8
22	19.2	19.2	19.2	20.5	21.1	20.9	21.9
23	13.2	13.2	13.2	14.4	14.8	14.9	15.7
24	10.8	10.8	10.8	13.6	13.6	14.6	15.4
25-29	4.2	4.2	4.2	4.3	4.5	4.5	4.8
30-34	1.6	1.6	1.6	1.7	1.8	1.9	2.0
35-44	1.1	1.1	1.1	2.3	2.3	2.7	3.7
Part-time:							
16	0.1	0.1	0.1	0.1	0.1	0.1	0.1
17	0.4	0.4	0.4	0.6	0.6	0.8	0.8
18	3.9	3.9	3.9	4.1	4.1	4.4	4.5
19	4.3	4.3	4.3	4.6	4.6	4.9	4.9
20	5.8	5.8	5.8	6.1	6.1	6.4	6.5
21	5.6	5.6	5.6	6.2	6.2	6.5	6.5
22	9.1	9.1	9.1	9.9	9.9	10.0	12.0
23	6.2	6.2	6.2	6.5	6.6	6.9	7.0
24	5.2	5.2	5.2	5.4	5.5	5.9	6.0
25-29	5.3	4.9	4.9	5.1	5.2	5.2	5.4
30-34	4.1	3.8	3.8	4.0	4.0	4.1	4.3
35-44	3.8	3.8	3.8	3.9	3.9	4.0	4.1
Women							
Full-time:							
16	0.2	0.2	0.2	0.2	0.2	0.2	0.2
17	4.1	4.1	4.1	4.5	4.5	4.7	4.7
18	36.2	36.2	36.2	37.6	39.0	43.1	43.1
19	37.8	37.8	37.8	40.0	42.1	45.0	45.0
20	32.0	32.0	32.0	33.9	35.4	39.7	39.7
21	29.2	29.2	29.2	30.4	31.4	35.4	35.4
22	15.1	15.1	15.1	18.5	18.5	18.9	18.9
23	12.3	12.3	12.3	14.5	16.0	17.2	17.2
24	9.1	9.1	9.1	11.7	12.4	12.3	12.3
25-29	3.7	3.7	3.7	4.3	4.3	4.9	4.9
30-34	2.1	2.1	2.1	2.5	2.5	2.8	2.8
35-44	1.8	1.8	1.8	2.1	2.1	2.5	2.5
Part-time:							
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.5	0.5	0.5	0.5	0.5	0.5	0.5
18	5.4	5.4	5.4	6.7	6.7	6.6	7.2
19	5.6	5.6	5.6	6.3	6.3	6.7	6.7
20	6.7	6.7	6.7	7.7	8.2	8.4	8.4
21	6.2	6.2	6.2	7.3	7.9	7.8	8.6
22	10.5	10.5	10.5	11.3	12.1	13.6	13.6
23	8.7	8.7	8.7	8.8	9.2	11.6	11.6
24	6.4	6.4	6.4	6.5	6.8	7.8	7.8
25-29	6.9	6.9	6.9	7.8	8.4	9.7	9.7
30-34	5.0	5.0	5.0	5.0	5.0	5.0	5.0
35-44	7.2	7.2	7.2	7.2	7.2	7.2	7.2

Table A1.4.—Full-time and part-time equations for college enrollment rates of men

Independent variable	Coefficient	Standard error	T-statistic	R^2	F-Statistic
Full-time					
Constant	-3.39	0.43	-7.8	.99	692.1
Dummy18	2.43	0.07	33.8		
Dummy19	2.48	0.09	28.5		
Dummy20	2.34	0.09	26.4		
Dummy21	2.25	0.08	27.5		
Dummy22	1.82	0.16	11.4		
Dummy23	1.39	0.10	13.8		
Dummy24	1.14	0.16	7.1		
Dummy25-29	0.36	0.13	2.9		
Dummy30-34	-0.60	0.10	-6.1		
Dummy35-44	-1.28	0.15	-8.4		
Log Unemployment rate (LNURM)	0.09	0.05	1.9		
Log of four-period weighted average of per capita real disposable income (LNPCIMA)	0.09	0.17	0.5		
Rho17	0.07	0.24	0.3		
Rho18	0.48	0.19	2.5		
Rho19	0.61	0.19	3.2		
Rho20	0.54	0.19	2.8		
Rho21	0.50	0.21	2.4		
Rho22	0.80	0.16	4.8		
Rho23	0.46	0.22	2.1		
Rho24	0.78	0.16	4.9		
Rho25-29	0.69	0.16	4.4		
Rho30-34	0.30	0.21	1.4		
Rho35-44	0.61	0.18	3.4		
Part-time					
Constant	-7.01	0.30	-23.6	.94	88.3
Dummy18	2.25	0.07	30.7		
Dummy19	2.32	0.07	32.0		
Dummy20	2.66	0.08	34.6		
Dummy21	2.53	0.09	28.7		
Dummy22	2.98	0.12	25.2		
Dummy23	2.58	0.10	26.5		
Dummy24	2.27	0.08	28.7		
Dummy25-29	2.53	0.11	23.4		
Dummy30-34	2.22	0.13	17.7		
Dummy35-44	2.06	0.10	21.1		
Log Unemployment rate (LNURM)	0.07	0.02	3.0		
Log four-period weighted average of per capita real disposable income (LNPCIMA)	0.73	0.12	6.3		
Rho17	-0.65	0.22	-3.0		
Rho18	-0.28	0.27	-1.1		
Rho19	-0.32	0.30	-1.1		
Rho20	0.39	0.25	1.5		
Rho21	0.59	0.24	2.4		
Rho22	0.07	0.31	0.2		
Rho23	0.01	0.28	0.1		
Rho24	-0.12	0.27	-0.4		
Rho25-29	0.52	0.19	2.7		
Rho30-34	0.61	0.18	3.3		
Rho35-44	0.33	0.25	1.3		

R^2 = Coefficient of determination.
F-Statistic = Obtained statistic for the F value.

Where:

Dummy(age) = 1 for each age and 0 otherwise
LNURM = Log unemployment rates by age
LNPCIMA = Log of four-period weighted average of per capita real disposable income

NOTE: The regression method used to estimate the full-time and part-time equations was pooled least squares with first-order autocorrelation correction. The time period used in the full-time equation is from 1972 to 1993. The number of observations is 242. The time period used in the part-time equation is from 1978 to 1992. The number of observations is 165.

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Table A1.5.—Equations for college enrollment rates of women, by age and attendance status

Equation	R^2	Durbin-Watson statistic [1]	Estimation technique [2]	Rho
RTFT18W = 0.16 + 0.000013PCI87 (4.6)	0.84	2.1	AR1	0.57 (2.9)
RTPT18W = -0.08 + 0.00001P18W + 0.000007PCI87 (2.5) (11.2) + 0.55URW1819 (2.5)	0.94	1.8	OLS	
RTFT19W = 0.03 + 0.00002PCI87 (4.1)	0.92	1.8	AR1	0.82 (5.0)
RTPT19W = -0.058 + 0.000007PCI87 + 0.061URW1819 (11.7) (2.1)	0.95	1.8	AR1	0.42 (1.7)
RTFT20W = 0.024 + 0.000018PCI87 (3.0)	0.92	1.4	AR1	0.89 (6.4)
RTPT20W = -0.027 - 0.00001P20W + 0.000007PCI87 (-2.3) (17.1) + 0.17URW2024 (4.4)	0.95	1.9	OLS	
RTFT21W = 0.095 - 0.000097P21W + 0.000021PCI87 (-2.4) (3.8) + 0.53URW2024 (2.3)	0.94	1.5	AR1	0.83 (5.4)
RTPT21W = -0.028 - 0.0000015P21W + 0.0000071PCI87 (-2.4) (17.3) + 0.166URW2024 (3.9)	0.95	1.5	OLS	
RTFT22W = -0.23 + 0.000024PCI87 + 0.22URW2024 (10.5) (2.0)	0.98	2.0	AR1	0.71 (4.1)
RTPT22W = -0.043 + 0.0000085PCI87 + 0.18URW2024 (4.6) (2.0)	0.87	1.8	AR1	0.70 (3.6)
RTFT23W = -0.17 + 0.000017PCI87 + 0.22URW2024 (4.8) (2.0)	0.95	1.4	AR1	0.87 (5.3)
RTPT23W = -0.007 + 0.0000056PCI87 (2.5)	0.80	1.5	AR1	0.79 (4.1)
RTFT24W = -0.086 - 0.00003P24W + 0.000014PCI87 (-2.4) (7.9) + 0.25URW2024 (3.6)	0.96	1.8	AR1	0.78 (3.8)
RTPT24W = 0.012 + 0.0000031PCI87 (2.1)	0.72	1.1	AR1	0.78 (5.1)
RTFT2529W = -0.05 + 0.0000051PCI87 + 0.18URW25& (9.8) (5.2)	0.97	1.5	AR1	0.74 (4.3)
RTPT2529W = -0.02 + 0.0000056PCI87 + 0.12URW25& (5.4) (2.0)	0.94	1.3	AR1	0.82 (6.0)
RTFT3034W = -0.24 + 0.0000028PCI87 + 0.055URW25& (9.8) (2.0)	0.95	2.0	AR1	0.55 (2.5)

Table A1.5.—Equations for college enrollment rates of women, by age and attendance status—Continued

Equation	R^2	Durbin-Watson statistic [1]	Estimation technique [2]	Rho
RTPT3034W = -0.031 + 0.0000049PCI87 (2.7) + 0.24URW25& (3.3)	0.95	1.2	AR1	0.94 (9.4)
RTFT3544W = -0.027 + 0.0000028PCI87 (10.7) + 0.05URW25& (1.9)	0.95	2.2	AR1	0.51 (2.3)
RTPT3544W = -0.056 + 0.0000082PCI87 (5.5) + 0.18URW25& (2.1)	0.95	1.6	AR1	0.82 (5.8)

R^2 = Coefficient of determination.

[1] For an explanation of the Durbin-Watson statistic, see J. Johnston, *Econometric Methods*, New York: McGraw-Hill, 1972, pages 251–252.

[2] OLS = Ordinary Least Squares. AR1 is an estimation procedure for correcting the problem of first-order autocorrelation. For a general discussion of the problem of autocorrelation, and the methods to correct it, see Johnston (1972), chapter 8. For a discussion of the method used to forecast in the presence of autocorrelation, see G. Judge, W. Hill, R. Griffiths, H. Lutkepohl, and T. Lee, *The Theory and Practice of Econometrics*, New York: John Wiley and Sons, 1985, pages 315–318. Rho is the first order autocorrelation coefficient estimated when AR1 is used.

Where:

RTFT18W =Enrollment rate of 18-year-old women enrolled full- time
RTPT18W =Enrollment rate of 18-year-old women enrolled part- time
RTFT19W =Enrollment rate of 19-year-old women enrolled full- time
RTPT19W =Enrollment rate of 19-year-old women enrolled part- time
RTFT20W =Enrollment rate of 20-year-old women enrolled full- time
RTPT20W =Enrol nent rate of 20-year-old women enrolled part- time
RTFT21W =Enrollment rate of 21-year-old women enrolled full- time
RTPT21W =Enrollment rate of 21-year-old women enrolled part- time
RTFT22W =Enrollment rate of 22-year-old women enrolled full- time
RTPT22W =Enrollment rate of 22-year-old women enrolled part- time
RTFT23W =Enrollment rate of 23-year-old women enrolled full- time
RTPT23W =Enrollment rate of 23-year-old women enrolled part- time
RTFT24W =Enrollment rate of 24-year-old women enrolled full- time
RTPT24W =Enrollment rate of 24-year-old women enrolled part- time
RTFT2529W =Enrollment rate of 25- to 29-year-old women enrolled full- time
RTPT2529W =Enrollment rate of 25- to 29-year-old women enrolled part- time
RTFT3034W =Enrollment rate of 30- to 34-year-old women enrolled full- time
RTPT3034W =Enrollment rate of 30- to 34-year-old women enrolled part- time
RTFT3544W =Enrollment rate of 35- to 44-year-old women enrolled full- time
RTPT3544W =Enrollment rate of 35- to 44-year-old women enrolled part- time
P18W =Population of 18-year-old women
P20W =Population of 20-year-old women
P21W =Population of 21-year-old women
P24W =Population of 24-year-old women
PCI87 =Disposable income per capita in 1986–87 dollars
URW1819 =Unemployment rate of 18- to 19-year-olds
URW2024 =Unemployment rate of 20- to 24-year-olds
URW25& =Unemployment rate of 25 years old and over

NOTE: Numbers in parentheses are t-statistics. The time period of observations used in the equations is from 1972 to 1993.

Table A1.6.—Enrollment rates in public schools, by grade level

Grade level	Population base age	1993	Projected	
			2001	2006
Kindergarten	5	103.8	101.2	101.2
Grade 1	6	94.6	95.6	95.6
Elementary ungraded and special	5–13	1.5	1.6	1.6
Secondary ungraded and special	14–17	1.7	1.8	1.8
Postgraduate	18	0.3	0.3	0.3

Table A1.7.—Public school grade retention rates

Grade	1993	Projected	
		2001	2006
1 to 2	96.8	96.2	96.2
2 to 3	100.2	100.1	100.1
3 to 4	100.0	100.2	100.2
4 to 5	100.3	100.4	100.4
5 to 6	100.9	101.1	101.1
6 to 7	101.6	102.1	102.1
7 to 8	98.5	98.4	98.4
8 to 9	111.4	111.0	111.0
9 to 10	91.0	91.6	91.6
10 to 11	90.9	91.0	91.0
11 to 12	91.3	91.3	91.3

Table A1.8.—Full-time enrollment, by level enrolled and type of institution, as a percent of total enrollment, for each age and sex classification

Age	Men			Women		
	1993	2001	2006	1993	2001	2006
			Undergraduate, 4-year institutions			
16-17 years old	82.6	75.4	75.4	74.1	68.2	68.2
18-19 years old	66.8	66.0	66.0	69.7	69.3	69.3
20-21 years old	79.9	792	79.2	78.9	79.0	79.0
22-24 years old	61.8	62.9	62.9	60.5	60.9	60.9
25-29 years old	47.2	44.6	44.6	35.6	38.8	38.8
30-34 years old	31.6	30.8	30.8	41.2	41.1	41.1
35 years and over	32.5	32.9	32.9	41.7	41.6	41.6
			Undergraduate, 2-year institutions			
16-17 years old	17.4	24.5	24.5	25.9	31.8	31.8
18-19 years old	33.1	33.9	33.9	30.0	30.6	30.6
20-21 years old	20.0	20.0	20.0	20.4	20.1	20.1
22-24 years old	18.8	17.0	17.0	17.6	17.4	17.4
25-29 years old	17.5	16.8	16.8	27.5	27.8	27.8
30-34 years old	24.6	23.6	23.6	37.5	38.1	38.1
35 years and over	29.6	285	28.5	39.4	35.4	35.4
			Postbaccalaureate, 4-year institutions			
16–17 years old	—	—	—	—	—	—
18–19 years old	—	—	—	—	—	—
20–21 years old	—	—	—	—	—	—
22-24 years old	19.5	20.1	20.1	21.9	21.7	21.7
25-29 years old	35.3	38.6	38.6	36.9	33.4	33.4
30-34 years old	43.8	45.6	45.6	21.3	20.9	20.9
35 years and over	37.9	38.6	38.6	18.8	23.0	23.0

—Not applicable.

NOTE: Projections shown for 2001 and 2006 were adjusted to add to 100 percent before computing projections shown in tables 3 through 22.

Table A1.9.—Part-time enrollment, by level enrolled and type of institution, as a percent of total enrollment, for each age and sex classification

Age	Men			Women		
	1993	2001	2006	1993	2001	2006
			Undergraduate, 4-year institutions			
16-17 years old	12.9	09.5	09.5	21.6	12.0	12.0
18-19 years old	18.4	20.6	20.6	17.0	15.4	15.4
20-21 years old	24.0	22.5	22.5	26.5	26.0	26.0
22-24 years old	31.0	32.7	32.7	33.2	31.7	31.7
25-29 years old	34.1	30.9	30.9	23.3	25.7	25.7
30-34 years old	29.6	27.9	27.9	25.3	26.1	26.1
35 years and over	22.5	24.9	24.9	26.1	25.8	25.8
			Undergraduate, 2-year institutions			
16-17 years old	91.9	72.8	72.8	78.4	49.7	49.7
18-19 years old	82.0	79.2	79.2	83.0	84.5	84.5
20-21 years old	75.5	77.0	77.0	73.5	73.7	73.7
22-24 years old	57.1	57.2	57.2	53.9	55.8	55.8
25-29 years old	46.4	50.5	50.5	58.8	54.6	54.6
30-34 years old	47.2	47.9	47.9	56.0	56.6	56.6
35 years and over	49.8	47.4	47.4	51.7	52.3	52.3
			Postbaccalaureate, 4-year institutions			
16-17 years old	0.0	0.0	0.0	0.0	0.0	0.0
18-19 years old	0.0	0.3	0.3	0.0	0.1	0.1
20-21 years old	0.6	0.5	0.5	0.0	0.3	0.3
22-24 years old	11.9	10.1	10.1	12.9	12.5	12.5
25-29 years old	19.5	18.5	18.5	17.9	19.6	19.6
30-34 years old	23.2	24.2	24.2	18.7	17.3	17.3
35 years and over	27.8	27.7	27.7	22.2	21.9	21.9

NOTE: Projections shown for 2001 and 2006 were adjusted to add to 100 percent before computing projections shown in tables 3 through 22.

Table A1.10.—Public college enrollment as a percent of total enrollment, by attendance status, sex, level enrolled, and by type of institution

Enrollment category	Men			Women		
	1993	2001	2006	1993	2001	2006
Full-time, undergraduate, 4-year institutions	69.6	69.7	69.7	68.2	68.6	68.6
Part-time, undergraduate, 4-year institutions	72.4	72.6	72.6	68.4	69.2	69.2
Full-time, undergraduate, 2-year institutions	92.5	92.1	92.1	92.4	91.3	91.3
Part-time, undergraduate, 2-year institutions	97.8	97.7	97.7	98.0	98.0	98.0
Full-time, postbaccalaureate, 4-year institutions	55.5	55.9	55.9	57.9	58.7	58.7
Part-time, postbaccalaureate, 4-year institutions	58.5	58.6	58.6	64.5	65.5	65.5

Table A1.11.—Graduate enrollment as a percent of total postbaccalaureate enrollment, by sex and attendance status, and by type and control of institution

Enrollment categoy	Men			Women		
	1993	2001	2006	1993	2001	2006
Full-time, 4-year, public	78.4	77.5	77.5	81.5	81.1	81.1
Part-time, 4-year, public	98.8	98.7	98.7	99.5	99.4	99.4
Full-time, 4-year, private	58.8	58.2	58.2	68.1	66.6	66.6
Part-time, 4-year, private	91.2	91.6	91.6	94.8	95.2	95.2

Table A1.12.—Full-time-equivalent of part-time enrollment as a percent of part-time enrollment, by level enrolled and by type and control of institution

Enrollment category	1993	2001	2006
Public, 4-year, undergraduate	40.0	40.0	40.0
Public, 2-year, undergraduate	33.6	33.8	33.8
Private, 4-year, undergraduate	40.0	39.9	39.9
Private, 2-year, undergraduate	39.2	39.3	39.3
Public, 4-year, graduate	36.2	36.3	36.3
Private, 4-year, graduate	38.3	38.2	38.2
Public, 4-year, first-professional	80.0	63.9	63.9
Private, 4-year, first-professional	55.6	55.8	55.8

Table A1.13.—Enrollment (assumptions)

Variables	Assumptions	Alternatives	Tables
Elementary and Secondary enrollment	Age-specific enrollment rates will remain constant at levels consistent with the most recent rates.	Middle (no alternatives)	1, 2
	Public enrollment rates and public grade retention rates will remain constant at levels consistent with the most recent rates.	Middle (no alternatives)	1, 2
	The percentage of 7th and 8th grade public students enrolled in school organized as secondary schools will remain constant at levels consistent with the most recent rates.	Middle (no alternatives)	2
College full-time and part-time enrollment, by age			
Men	Age-specific enrollment rates will increase over the projection period.	Middle	3–5 9–16
	Age-specific enrollment rates will remain at their most recent levels.	Low	3–5 9–16
	Age-specific enrollment rates will either equal the middle alternative or increase at a faster rate.	High	3–5 9–16
Women	Age-specific enrollment rates will increase over the projection period.	Middle	3–5 9–16
	Age-specific enrollment rates will remain at their most recent levels.	Low	3–5 9–16
	Age-specific enrollment rates will either equal the middle alternative or increase at a faster rate.	High	3–5 9–16
College enrollment, by sex, attendance status, and level enrolled by student, and by type of institution	For each group and for each attendance status separately, enrollment by sex and level enrolled by student, and by type of institution as a percent of total enrollment, will follow past trends through 2006. For each age group and attendance status category, the restriction that the sum of the percentages must equal 100 percent was applied.	High, middle, and low	3–5 9–16
College enrollment, by control of institution	For each enrollment category, by sex, attendance status, and level enrolled by student, and by type of institution, public enrollment as a percent of total enrollment will remain constant at levels consistent with the most recent rates.	High, middle, and low	3–5 9–16
Graduate enrollment	For each enrollment category, by sex and attendance status of student, and by type and control of institution, graduate enrollment as a percent of postbaccalaureate enrollment will remain constant at levels consistent with the most recent rates.	High, middle, and low	17
Full-time-equivalent of part-time enrollment	For each enrollment category, by type and control of institution and level enrolled by student, the percent that full-time-equivalent of part-time enrollment is of part-time enrollment will remain constant at levels consistent with the most recent rates.	High, middle, and low	23–25

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Table A1.14.—Enrollment (estimation methods)

Variables	Years	Estimation method	Tables
Enrollment in private elementary and secondary schools, by level	1988 1989 1990	Grade-by-grade data for private elementary, secondary, and combined schools were aggregated to estimate private school enrollment by grade level.	1 2
Enrollment in institutions of higher education, by age and attendance status	1986 1991 1994	For each sex, enrollment data from the Bureau of Census by individual ages and by attendance status for 2-year age groups were combined by assuming that within the 2-year age groups, age and attendance status were distributed independently. The resultant enrollment estimates by age and attendance status were then adjusted to NCES enrollment counts by attendance status.	6 7 8

Table A1.15—Number of years, projection methods, and smoothing constants used to project public school enrollments and high school graduates, by state

Projected state variable	Number of years (1970–1993)	Projection method	Smoothing constant	Choice of smoothing constant
Enrollment rates	24	Single exponential smoothing	0.4	Empirical research
Grade retention rates	24	Single exponential smoothing	0.4	Empirical research
Graduates/grade 12 enrollment	24	Single exponential smoothing	0.4	Empirical research

Table A1.16—Weights used to combine the enrollment projections, by projection method and lead time

Projection method	Lead time, in years											
	1	2	3	4	5	6	7	8	9	10	11	12
Grade retention	1	8/9	7/9	6/9	5/9	4/9	3/9	2/9	1/9	0	0	0
Enrollment rate	0	1/9	2/9	3/9	4/9	5/9	6/9	7/9	8/9	1	1	1

A2. High School Graduates

National

Projections of public high school graduates were developed in the following manner. The number of public high school graduates was expressed as a percent of grade 12 enrollment in public schools for 1972 to 1993. This percent was projected using single exponential smoothing and applied to projections of grade 12 enrollment to yield projections of high school graduates in public schools. (The dropout rate is not related to this percent. This percent does not make any assumptions regarding the dropout rate.) The grade 12 enrollment was projected based on grade-by-grade retention rates and population projections developed by the Bureau of the Census. This percent was assumed to remain constant at levels consistent with the most recent rates. This method assumes that past trends in factors affecting graduation will continue over the projection period.

Projections of private high school graduates were derived in the following manner. From 1970–71 to 1993–94, the ratio of private high school graduates to public school graduates was calculated. These ratios were projected using single exponential smoothing, yielding a constant value over the projection period. This constant value was then applied to projections of public high school graduates to yield projections of private high school graduates. This method assumes that the future pattern of private high school graduates will be the same as that of public high school graduates. The reader should be aware that a number of factors could alter the assumption of a constant ratio over the projection period.

Projection Accuracy

An analysis of projections from models used in the past 12 editions of *Projections of Education Statistics* indicates that the mean absolute percentage errors (MAPEs) for projections of public high school graduates were 0.6 percent for 1 year ahead, 1.0 percent for 2 years ahead, 1.5 percent for 5 years ahead, and 3.8 percent for 10 years ahead. For the 2-year-ahead prediction, this means that one would expect the projection to be within 1.0 percent of the actual value, on the average.

State-Level

This edition contains projections of high school graduates from public schools by state from 1994–95 to 2005–2006. Public school graduate data from the National Center for Education Statistics' Common Core of Data survey for 1969–70 to 1993–94 were used to develop these projections. This survey does not collect graduate data for private schools.

Projections of public high school graduates by state were developed in the following manner. For each state, the number of public high school graduates was expressed as a percent of grade 12 enrollment in public schools for 1970 to 1993. This percent was projected using single exponential smoothing and applied to projections of grade 12 enrollment to yield projections of high school graduates in public schools. Projections of grade 12 enrollment were developed based on the grade retention method discussed in section A1, Enrollment. This percent was assumed to remain constant at levels consistent with the most recent rates. This method assumes that past trends in factors affecting public high school graduates will continue over the projection period.

A3. Earned Degrees Conferred

Projections of associate, bachelor's, master's, doctor's, and first-professional degrees by sex were based on demographic models that relate degree awards to college-age populations and college enrollment by level enrolled and attendance status.

Associate Degrees

Associate degree projections by sex were based on undergraduate enrollment by attendance status in 2-year institutions. Results of the regression analysis used to project associate degrees by sex are shown in table A3.1.

Bachelor's Degrees

Bachelor's degree projections by sex were based on the 18- to 24-year-old population and undergraduate enrollment by attendance status in 4-year institutions. Results of the regression analysis used to project bachelor's degrees by sex are shown in table A3.2.

Master's Degrees

Master's degree projections for men were based on the 35- to 44-year-old population and graduate enrollment by attendance status in 4-year institutions. Results of the regression analysis used to project master's degrees for men are shown in table A3.3. Projections of master's degrees awarded to women were calculated as the average of the low and high alternatives. (The low alternative assumes that master's degrees awarded to women will decrease by 10,000 degrees each year through 2005–2006. The high alternative assumes that master's degrees awarded to women will increase by 10,000 degrees each year through 2005–2006.

Doctor's Degrees

Doctor's degree projections by sex were based on the 35- to 44-year-old population, graduate enrollment by attendance status in 4-year institutions, and a time trend variable. Results of the regression analysis used to project doctor's degrees for women are shown in table A3.4.

First-Professional Degrees

First-professional degree projections by sex were based on first-professional enrollment by attendance status in 4-year institutions. Results of the regression analysis used to project first-professional degrees by sex are shown in table A3.5.

Methodological Tables

These tables describe equations used to calculate projections (tables A3.1 through A3.5), and basic assumptions underlying projections (table A3.6).

Projection Accuracy

An analysis of projection errors from similar models used in the past ten editions of *Projections of Education Statistics* indicates that mean absolute percentage errors (MAPEs) for bachelor's degree projections were 2.2 percent for 1 year out, 3.6 percent for 2 years out, and 7.2 percent for 5 years out. For the 1-year-out prediction, this means that one would expect the projection to be within 2.2 percent of the actual value, on the average. For first-professional degrees, the MAPEs were 2.6, 3.7, and 1.6 percent, respectively. For doctor's degrees, based on the past nine editions of *Projections of Education Statistics*, the MAPEs were 2.6, 4.4, and 8.8 percent, respectively. MAPEs for master's degrees, based on the past eight editions of *Projections of Education Statistics*, were 2.5, 5.2, and 11.4, respectively. MAPEs for associate degrees, based on the past six editions of *Projections of Education Statistics*, were 2.4 percent for 1 year out, 3.7 percent for 2 years out, and 6.7 percent for 3 years out.

Table A3.1.—Equations for associate degrees

	Equation			R^2	Durbin-Watson statistic [1]	Estimation technique
Men	ASSOCM	=	102,794 + 71.9UGFTM2 + 28.3UGPTM2 (1.5) (1.5)	0.72	1.6	AR1 [2]
Women	ASSOCW	=	23,805.2 + 262.5UGFTW2 (13.9)	0.98	1.6	AR1 [3]

R^2 = Coefficient of determination.

[1] For an explanation of the Durbin-Watson statistic, see J. Johnston, *Econometric Methods*, New York: McGraw-Hill, 1972, pages 251–252.

[2] AR1 equals an estimation procedure for correcting the problem of first-order autocorrelation. The maximum likelihood procedure of the Regression Analysis of Time Series (RATS) software was used to estimate rho. In this equation, rho is equal to 0.62 with a t-statistic of (2.7). For a general discussion of the problem of autocorrelation, and the method used to forecast in the presence of autocorrelation, see G. Judge, W. Hill, R. Griffiths, H. Lutkepohl, and T. Lee, *The Theory and Practice of Econometrics*, New York: John Wiley and Sons, 1985, pages 315-318.

[3] AR1 equals an estimation procedure for correcting the problem of first-order autocorrelation. Specifically, the maximum likelihood procedure of the statistical program RATS was used to estimate rho. In this equation, rho is equal to 0.73 with a t-statistic of (4.4).

Where:

ASSOCM =Number of associate degrees awarded to men
ASSOCW =Number of associate degrees awarded to women

UGFTM2 =Full-time male undergraduate enrollment in 2-year institutions lagged 2 years
UGPTM2 =Part-time male undergraduate enrollment in 2-year institutions lagged 2 years
UGFTW2 =Full-time female undergraduate enrollment in 2-year institutions lagged 2 years

NOTE: Numbers in parentheses are t-statistics. The time period of observations used in the equations is from 1970–71 to 1992–93.

Table A3.2.—Equations for bachelor's degrees

		Equation	R^2	Durbin-Watson statistic [1]	Estimation technique
Men	BACHM	= 248,841 - 12.4P1824M + 179.6UGFT4M (-3.3) (5.1)	0.82	1.7	AR1 [2]
Women	BACHW	= 253,059 - 19.4P1824W + 239.4UGFT4W (-4.0) (16.8)	0.99	1.4	AR1 [3]

R^2 = Coefficient of determination.

[1] For an explanation of the Durbin-Watson statistic, see J. Johnston, *Econometric Methods*, New York: McGraw-Hill, 1972, pages 251–252.

[2] AR1 equals an estimation procedure for correcting the problem of first-order autocorrelation. The maximum likelihood procedure of the Regression Analysis of Time Series (RATS) software was used to estimate rho. In this equation, rho is equal to 0.60 with a t-statistic of (3.1). For a general discussion of the problem of autocorrelation, and the method used to forecast in the presence of autocorrelation, see G. Judge, W. Hill, R. Griffiths, H. Lutkepohl, and T. Lee, *The Theory and Practice of Econometrics*, New York: John Wiley and Sons, 1985, pages 315-318.

[3] AR1 equals an estimation procedure for correcting the problem of first-order autocorrelation. The maximum likelihood procedure of the Regression Analysis of Time Series (RATS) software was used to estimate rho. In this equation, rho is equal to 0.72 with a t-statistic of (4.7).

Where:

BACHM =Number of bachelor's degrees awarded to men
BACHW =Number of bachelor's degrees awarded to women
P1824M =Population of 18- to 24-year-old men
P1824W =Population of 18- to 24-year-old women
UGFT4M =Full-time male undergraduate enrollment in 4-year institutions lagged 2 years
UGFT4W =Full-time female undergraduate enrollment in 4-year institutions lagged 3 years

NOTE: Numbers in parentheses are t-statistics. The time period of observations used in the equations is from 1970–71 to 1992–93.

Table A3.3.—Equation for master's degrees

	Equation				R [2]	Durbin-Watson statistic [1]	Estimation technique
Men	MASTM	=	18,889.3 - 4.0P3544M + 1,200.2GFTM (-4.6) (5.1) - 383.7GPTM (-3.5)		0.54	1.3	OLS [2]

R^2 = Coefficient of determination.

[1] For an explanation of the Durbin-Watson statistic, see J. Johnston, *Econometric Methods*, New York: McGraw-Hill, 1972, pages 251–252.

[2] OLS equals Ordinary Least Squares.

Where:

MASTM =Number of master's degrees awarded to men
P3544M =Population of 35- to 44-year-old men
GFTM =Full-time male graduate enrollment lagged 2 years
GPTM =Part-time male graduate enrollment lagged 2 years

NOTE: Numbers in parentheses are t-statistics. The time period of observations used in the equations is from 1970–71 to 1992–93.

Table A3.4.—Equations for doctor's degrees

			Equation	R^2	Durbin-Watson statistic [1]	Estimation technique
Men	DOCM	=	- 6,847.0 + 1.3P3544M + 84.4GFTM (6.5) (6.1) - 952.2TIME (-12.1)	0.90	1.3	OLS [2]
Women	DOCW	=	4,681.2 + 464.4TIME (38.6)	0.99	0.5	OLS [2]

R^2 = Coefficient of determination.

[1] For an explanation of the Durbin-Watson statistic, see J. Johnston, *Econometric Methods*, New York: McGraw-Hill, 1972, pages 251–252.

[2] OLS equals Ordinary Least Squares.

Where:

DOCM =Number of doctor's degrees awarded to men
DOCW =Number of doctor's degrees awarded to women
P3544M =Population of 35- to 44-year-old men
GFTM =Full-time male graduate enrollment
TIME =Time trend, 1970–71 equals 1

NOTE: Numbers in parentheses are t-statistics. The time period of observations used in the equations is from 1970–71 to 1992–93.

Table A3.5.—Equations for first-professional degrees

	Equation	R^2	Durbin-Watson statistic [1]	Estimation technique
Men	FPROM = 5,711.8 + 260.7FPFTM (31.2)	0.91	2.0	AR1 [2]
Women	FPROW = -1,721.6 + 274.8FPFTW + 390.3FPPTW (15.6) (2.6)	0.99	1.8	OLS [3]

R^2 = Coefficient of determination.

[1] For an explanation of the Durbin-Watson statistic, see J. Johnston, *Econometric Methods*, New York: McGraw-Hill, 1972, pages 251–252.

[2] AR1 equals an estimation procedure for correcting the problem of first-order autocorrelation. The maximum likelihood procedure of the Regression Analysis of Time Series (RATS) software was used to estimate rho. In this equation, rho is equal to 0.52 with a t-statistic of (2.5). For a general discussion of the problem of autocorrelation, and the method used to forecast in the presence of autocorrelation, see G. Judge, W. Hill, R. Griffiths, H. Lutkepohl, and T. Lee, *The Theory and Practice of Econometrics*, New York: John Wiley and Sons, 1985, pages 315-318.

[3] OLS equals Ordinary Least Squares.

Where:

FPROM =Number of first-profesional degrees awarded to men
FPROW =Number of first-professional degrees awarded to women
FPFTM =Full-time male first-professional enrollment lagged 2 years
FPFTW =Full-time female first-professional enrollment lagged 1 year
FPPTW =Part-time female first-professional enrollment lagged 2 years

NOTE: Numbers in parentheses are t-statistics. The time period of observations used in the equations is from 1970–71 to 1992–93.

Table A3.6.— Earned degrees conferred (assumptions)

Variables	Assumptions	Alternatives	Tables
Associate degrees			
Men	The number of associate degrees awarded to men is a linear function of full-time and part-time undergraduate enrollment in 2-year institutions lagged 2 years. This relationship will continue through 2005–2006.	Middle	27
Women	The number of associate degrees awarded to women is a linear function of full-time undergraduate enrollment in 2-year institutions lagged 2 years. This relationship will continue through 2005–2006.	Middle	27
Bachelor's degrees			
Men	The number of bachelor's degrees awarded to men is a linear function of full-time undergraduate enrollment in 4-year institutions lagged 2 years and the 18- to 24-year-old population. This relationship will continue through 2005–2006.	Middle	28
Women	The number of bachelor's degrees awarded to women is a linear function of full-time undergraduate enrollment in 4-year institutions lagged 3 years and the 18- to 24-year-old population. This relationship will continue through 2005–2006.	Middle	28
Master's degrees			
Men	The number of master's degrees awarded to men is a linear function of full-time and part-time graduate enrollment lagged 2 years and the 35- to 44-year-old population. This relationship will continue through 2005–2006.	Middle	29
Women	The number of master's degrees awarded to women equals the average of the low and high alternatives.	Middle	29
Doctor's degrees			
Men	The number of doctor's degrees awarded to men is a linear function of full-time graduate enrollment, the 35- to 44-year-old population, and time. This relationship will continue through 2005–2006.	Middle	30
Women	The number of doctor's degrees awarded to women is a linear function of time. This relationship will continue through 2005–2006.	Middle	30
First-professional degrees			
Men	The number of first-professional degrees awarded to men is a linear function of full-time first-professional enrollment lagged 2 years. This relationship will continue through 2005–2006.	Middle	31
Women	The number of first-professional degrees awarded to women is a linear function of full-time first-professional enrollment lagged 1 year and part-time first-professional enrollment lagged 2 years. This relationship will continue through 2005–2006.	Middle	31

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A4. Classroom Teachers

Public Classroom Teachers

Numbers of public elementary and secondary classroom teachers were projected using a model similar to that used in *Projections of Education Statistics to 2005*, only the coefficients were re-estimated. The number of public school teachers was projected separately for the elementary and secondary levels. The elementary teachers were modeled as a function of disposable income per capita, local education revenue receipts from state sources per capita, and elementary enrollment. Secondary teachers were modeled as a function of disposable income per capita, education revenue receipts from state sources per capita (lagged 3 years), and secondary enrollment. Both disposable income per capita and local education revenue receipts from state sources were in constant 1986–87 dollars.

The equations in this section should be viewed as forecasting rather than structural equations, as the limitations of time and available data precluded the building of a large-scale, structural teacher model. The particular equations shown were selected on the basis of their statistical properties, such as coefficients of determination (R^2s), the t-statistics of the coefficients, the Durbin-Watson statistic, and residual plots.

The multiple regression technique will yield good forecasting results only if the relationships that existed among the variables in the past continue throughout the projection period.

The public elementary classroom teacher model is:

$$ELTCH = b_0 + b_1PCI87 + b_2SGRANT + b_3ELENR$$

where:

ELTCH is the number of public elementary classroom teachers,

PCI87 is disposable income per capita in 1986–87 dollars;

SGRANT is the level of education revenue receipts from state sources per capita in 1986–87 dollars; and

ELENR is the number of students enrolled in public elementary schools.

Each variable affects the number of teachers in the expected way. As people receive more income, the state spends more money on education, and as enrollment increases, the number of elementary teachers hired increases.

The public secondary classroom teacher model is:

$$SCTCH = b_0 + b_1PCI87 + b_2SGRANT3 + b_3SCENR$$

where:

SCTCH is the number of public secondary classroom teachers;

PCI87 is disposable income per capita in 1986–87 dollars;

SGRANT3 is the level of education revenue receipts from state sources per capita in 1986–87 dollars, lagged 3 years, and;

SCENR is the number of students enrolled in public secondary schools.

Each variable affects the number of teachers in the expected way. As people receive more income, the state spends more money on education, and as enrollment increases, the number of secondary teachers hired increases.

Table A4.1 summarizes the results for the elementary and secondary public teacher models.

Enrollment is by organizational level, not by grade level. Thus, secondary enrollment is not the same as grade 9–12 enrollment because some states count some grade 7 and 8 enrollment as secondary. The distribution of the number of teachers is by organizational level, not by grade span.

Private Classroom Teachers

Projections of private classroom teachers were derived in the following manner. For 1960 to 1992, the ratio of private school teachers to public school teachers was calculated by organizational level. These ratios were projected using single exponential smoothing, yielding a constant value over the projection period. This constant value was then applied to projections of public school teachers by organizational level to yield projections of private school teachers. This method assumes that the future pattern in the trend of private school teachers will be the same as that for public school teachers. The reader is cautioned that a number of factors could alter the assumption of constant ratios over the projection period.

The total number of public school teachers, enrollment by organizational level, and education revenue receipts from state sources used in these projections were from the Common Core of Data (CCD) survey conducted by NCES. The proportion of teachers by organizational level was taken from the National Education Association and then applied to the total number of teachers from CCD to produce the number of teachers by organizational level.

Disposable income was obtained from DRI/McGraw-Hill and population data were from the Bureau of the Census.

Projection Accuracy

An analysis of projection errors from the past 12 editions of *Projections of Education Statistics* indicated that the mean absolute percentage errors (MAPEs) for projections of classroom teachers in public elementary and secondary schools were 0.9 percent for 1 year out, 1.3 percent for 2 years out, 2.8 percent for 5 years out, and 3.4 percent for 10 years out. For the 2-year-ahead prediction, this means that one would expect the projection to be within 1.3 percent of the actual value, on the average.

Table A4.1.—Equations for public elementary and secondary classroom teachers

		Equation	R^2	Durbin-Watson statistic [1]	Estimation technique
Elementary	ELTCH	= - 250.2 + 0.052PCI87 + 0.7SGRANT (4.3) (1.6) + 0.03ELENR (4.7)	0.99	1.5	AR1 [2]
Secondary	SCTCH	= - 211.9 + 0.04PCI87 + 0.4SGRANT3 (6.9) (2.9) + 0.04SCENR (18.8)	0.97	1.5	OLS [3]

R^2 = Coefficient of determination.

[1] For an explanation of the Durbin-Watson statistic, see J. Johnston, *Econometric Methods*, New York: McGraw-Hill, 1972, pages 251–252.

[2] AR1 equals an estimation procedure for correcting the problem of first-order autocorrelation. In this equation, rho is equal to 0.83 with a t-statistic of (6.4). For a general discussion of the problem of autocorrelation, and the method used to forecast in the presence of autocorrelation, see G. Judge, W. Hill, R. Griffiths, H. Lutkepohl, and T. Lee, *The Theory and Practice of Econometrics*, New York: John Wiley and Sons, 1985, pages 315-318.

[3] OLS equals Ordinary Least Squares.

Where:

ELTCH =Number of public elementary classroom teachers
SCTCH =Number of public secondary classroom teachers
PCI87 =Disposable income per capita in 1986–87 dollars
SGRANT =Education revenue receipts from state sources per capita
SGRANT3 =Education revenue receipts from state sources per capita lagged 3 years
ELENR =Number of students enrolled in public elementary schools
SCENR =Number of students enrolled in public secondary schools

NOTE: Numbers in parentheses are t-statistics. The time period of observations used in the equation for elementary teachers is from 1960 to 1992. The time period used in the equation for secondary teachers is from 1965 to 1992.

A5. Expenditures of Public Elementary and Secondary Schools

Econometric techniques were used to produce the projections for current expenditures and average teacher salaries. The equations in this chapter should be viewed as forecasting equations rather than structural equations. The limitations of time and available data precluded the building of large-scale, structural, models. The particular equations shown were selected on the basis of their statistical properties, such as coefficients of determination (R^2's), the t-statistics of the variables, the Durbin-Watson statistic, and residual plots. These econometric models will yield good forecasting results only if the relationships that existed among the variables in the past continue throughout the projection period.

The Elementary and Secondary School Current Expenditure Model

There has been a large body of work, both theoretical and empirical, on the demand for local public services such as education *. The elementary and secondary school current expenditure model is based on this work.

The model that is the basis for the elementary and secondary school current expenditure model has been called the median voter model. In brief, the theory states that spending for each public good in the community (in this case, education), reflects the preferences of the "median voter" in the community. This individual is identified as the voter in the community with the median income and median property value. Hence, the amount of spending in the community reflects the price of education facing the voter with the median income, as well as his income and tastes. There are competing models in which the level of spending reflects the choices of others in the community, such as the "bureaucrats." The median voter model was chosen as the basis of the elementary and secondary school current expenditure model as it has been the one most thoroughly studied.

There have been many empirical studies of the demand for education expenditures using the median voter model. In most instances, researchers have used cross-sectional data. The elementary and secondary school current expenditure model was built on the knowledge gained from these cross-sectional studies and was adapted from them for use in a time series study.

In a median voter model, the demand for education expenditures is typically linked to four different types of variables: 1) measures of the income on the median voter; 2) measures of intergovernmental aid for education going indirectly to the median voter; 3) measures of the price to the median voter of providing one more dollar of education expenditures per pupil; and 4) any other variables that may affect one's tastes for education. The elementary and secondary school current expenditure model contains variables reflecting the first three types of variables. The model is:

$$\ln(\text{CUREXP}) = b_0 + b_1\ln(\text{PCI}) + b_2\ln(\text{SGRNT}) + b_3\ln(\text{ADAPOP})$$

where:

ln indicates the natural log;

CUREXP equals current expenditures of public elementary and secondary schools per pupil in average daily attendance in constant 1982–84 dollars;

PCI equals disposable income per capita in constant 1987 dollars;

SGRNT equals local governments' education revenue receipts from state sources, per capita, in constant 1982–84 dollars; and

ADAPOP equals the ratio of average daily attendance to the population.

The model was estimated using the AR1 model for correcting for autocorrelation. This was done because the test statistics were significantly better than those from the ordinary least squares (OLS) estimation, and the Durbin-Watson statistic was in the inconclusive region when the model was estimated using OLS. This is the fourth edition of *Projections of Education Statistics* in which this method of estimation, rather than OLS, was used. Ordinary least squares was used in the previous four editions of *Projections of Education Statistics*. The sample period was from 1959–60 to 1992–93.

There are potential problems with using a model for local government education expenditures for the nation as a whole. Two such problems concern the variable SGRNT. First, the amount of money which local governments receive for education from state government varies substantially by state. Second, the formulas used to apportion state moneys for education among local governments vary by state.

Beginning in 1988–89, there was a major change in the survey form used to collect data on current expenditures. This new survey form produces a more complete measure of current expenditures; therefore, the values for current

*For a review and discussion of this literature, see Inman, R. P. (1979), "The fiscal performance of local governments: an interpretive review," in *Current Issues in Urban Economics*, edited by P. Mieszkowski and M. Straszheim, Johns Hopkins Press, Baltimore, Maryland.

expenditures are not completely comparable to the previously collected numbers. In a crosswalk study, data for a majority of states were also collected for 1986–87 and 1987–88 that were comparable to data from the new survey form. A comparison of these data with those from the old survey form suggests that the use of the new survey form may have increased the national figure for current expenditures by approximately 1.4 percent over what it would have been if the survey form had not been changed. When the model was estimated, all values for current expenditures before 1988–89 were increased by 1.4 percent.

The results for the model are shown in table A5.1. Each variable affects current expenditures in the direction that would be expected. As people receive more income, either directly (PCI) or from the state government (SGRNT), the level of spending increases. As the number of pupils increases relative to the population (that is, as ADAPOP increases), the level of spending per pupil falls.

From the cross-sectional studies of the demand for education expenditures, we have an estimate of how sensitive current expenditures are to changes in PCI and ADAPOP. We can compare the results from this model with those from the cross-sectional studies. For this model, an increase in PCI of 1 percent, with SGRNT and ADAPOP held constant, would result in an increase of current expenditures per pupil in average daily attendance of approximately 0.61 percent. With PCI and SGRNT held constant, an increase of 1 percent in ADAPOP would result in a decrease in current expenditures per pupil in average daily attendance of approximately 0.34 percent. Both numbers are well within the range of what has been found in other studies.

The results from this model are not completely comparable with those from some of the previous editions of *Projections of Education Statistics*. First, as with the previous edition, the population number for each school year is the Bureau of the Census's July 1 population number for the upcoming school year. In earlier editions, each school year's population number was the average of the DRI/McGraw-Hill's estimated population numbers of each quarter in that school year. Second, there was a change in the definition of the disposable income affecting the projections in *Projections of Education Statistics to 2004*, in *Projections of Education Statistics to 2005*, and in this edition.

Projections for total current expenditures were made by multiplying the projections for current expenditures per pupil in average daily attendance by projections for average daily attendance. The projections for total current expenditures were divided by projections for fall enrollment to produce projections of current expenditures per pupil in fall enrollment. Projections were developed in 1982–84 dollars and then placed in 1992–93 dollars using the Consumer Price Index. Current-dollar projections were produced by multiplying the constant-dollar projections by projections for the Consumer Price Index.

Three alternative sets of projections for current expenditures are presented: the middle alternative projections; the low alternative projections; and the high alternative projections. The alternative sets of projections differ because of varying assumptions about the growth paths for disposable income and revenue receipts from state sources.

The alternative sets of projections for the economic variables including disposable income were developed using variations of three economic scenarios developed by DRI for use on its U.S. Quarterly Model. The U.S. Quarterly model is an econometric model of the U.S. economy developed by DRI for the personal computer which projects more than 1,200 economic concepts. Periodically, DRI supplies alternative economic scenarios of the economy, including long-term scenarios. Users have the option of either producing projections directly from the scenarios supplied by DRI or first altering some of the underlying assumptions of the scenarios and then producing the projections. The August 1995 series of long-term scenarios was used as bases for the three sets of alternative economic projections used here, although there were some changes in the underlying assumptions.

DRI's trend scenario was used as a base for the middle alternative projections of the economic variables. DRI's trend scenario depicts a mean of possible paths that the economy could take over the forecast period, barring major shocks. The economy, in this scenario, evolves smoothly, if unspectacularly. The only change from DRI's trend scenario was that the most recent middle set of population projections as developed by the Bureau of the Census was substituted for DRI's population projections.

DRI's pessimistic scenario was used as a base for the low alternative projections. As with the middle set of projections, the Bureau of the Census' recent middle set of population projections was substituted for DRI's population projections. For the low alternative projections, some changes were made in some of DRI's assumptions concerning personal income that resulted in lower projections for disposable income.

Similarly, DRI's optimistic scenario was used as a base for the high alternative projections. The Bureau of the Census' recent middle set of population projection was substituted for DRI's population projections and some changes were made in some of DRI's assumptions concerning personal income that resulted in higher projections for disposable income.

Hence, using DRI's U.S. Quarterly Model and their August 1995 long-term scenarios, three sets of projections, the middle alternative projections, the low alternative projections, and the high alternative projections, were developed for the economic variables.

In the middle alternative projections, disposable income per capita rises each year from 1995–96 to 2005–2006 at rates between 1.1 percent and 1.7 percent. In the low alternative projections, disposable income per capita ranging between 0.1 percent and 1.6 percent and in the high alternative projections disposable income per capita rises at rates between 1.4 percent and 2.3 percent.

The greatest differences among the three alternative projections for the percent changes for disposable income per capita occur in the first years of the projection period.

This is because the three alternative sets of projections are based on quite different assumptions for the short term path of the economy. With the middle alternative projections, the economy is in a moderate recovery; with the low alternative projections, the economy is growing slowly; and with the high alternative projections, the economy is booming. For the later years of the projection period, the economy is assumed to be growing at steady rates for each alternative set of projections. Hence, the percent changes for disposable income per capita (and many other economic variables) are similar for the three alternative sets of projections for the later years of the projection period.

The alternative projections for revenue receipts from state sources were produced using the following model:

$$\ln(SGRNT) = b_0 + b_1\ln(PERTAX1) + b_2\ln(BUSTAX1) + b_3\ln(ADAPOP) + b_4\ln(RCPIANN/RCPIANN1)$$

where:

ln indicates the natural log;

SGRNT equals local governments' education revenue receipts from state sources, per capita, in constant 1982–84 dollars;

PERTAX1 equals personal taxes and nontax receipts to state and local governments, per capita, in constant 1982–84 dollars lagged one period;

BUSTAX1 equals indirect business taxes and tax accruals, excluding property taxes, to state and local governments, per capita, in constant 1982–84 dollars lagged one period;

ADAPOP equals the ratio of average daily attendance to the population;

RCPIANN equals the the inflation rate measured by the Consumer Price Index; and

RCPIANN1 equals the the inflation rate measured by the Consumer Price Index lagged 1 period.

This equation was estimated using the AR1 model for correcting for autocorrelation. The sample period was from 1960–61 to 1992–93. The results for the model are shown in table A5.1.

The values of the coefficients in this model follow expectations. As state governments receive more revenue (higher PERTAX1 and BUSTAX1), they have more money to send to local governments for education. As the enrollment increases relative to the population (higher ADAPOP), so does the amount of aid going to education. Finally, in years with rapidly increasing inflation (higher RCPIANN/RCPIANN1), the real dollar values of revenue receipts from state governments to local governments would fall, other things being equal.

This is the first edition of the *Projections of Education Statistics* that this model has been used to projection projections of SGRNT. In the previous four editions, a similar model was used. The greatest difference between the model used here and those used in earlier editions is that in this model, the variables were in log form. There were several reasons for the change to the log form including the results of a comparision of ex-post mean absolute percentage errors for both functional forms produced by excluding from one to five years from the end of each sample.

The three alternative sets of projections for SGRNT were produced using this model. Each is based on a different set of projections for personal taxes, business taxes, and the rate of change in the inflation rate. The middle set of projections was produced using the values for these variables from the middle set of alternative projections. The low set of projections was produced using the values from the low set of alternative projections and the high set of projections was produced using the values from the high set of alternative projections. In the middle set of projections, personal taxes and nontax receipts increase at rates between 0.9 percent and 2.5 percent and indirect business taxes and tax accruals increase at rates between 0.8 percent and 2.4 percent. In the low set of projections, personal taxes and nontax receipts increase at rates between 1.1 percent and 1.9 percent, and indirect business taxes and tax accruals increase at rates between -0.4 percent and 1.8 percent. In the high set of projections, personal taxes and nontax receipts increase at rates between 0.9 percent and 3.5 percent, and indirect business taxes and tax accruals increase at rates between 1.0 percent and 3.7 percent.

In the middle set of projections, revenue receipts from state sources increase at rates between 0.8 percent and 2.8 percent for the period from 1995–96 to 2005–2006. In the low set of projections, they increase at rates between 0.2 percent and 2.2 percent. In the high set of projections, they increase at rates between 1.1 percent and 3.8 percent.

The Elementary and Secondary Teacher Salary Model

Most studies conducted on teacher salaries, like those on current expenditures, have used cross-sectional data. Unlike current expenditures models, however, the models for teacher salaries from these existing cross-sectional studies cannot easily be reformulated for use with time-series data. One problem is that we do not have sufficient information concerning the supply of qualified teachers who are not presently teaching. Hence, the elementary and secondary salary model contains terms that measure the demand for teachers in the economy.

The elementary and secondary teacher salary model is:

$$\ln(SALRY) = b_0 + b_1\ln(CUREXP) + b_2\ln(ADAPOP) + b_3\ln(ADA1/ADA2)$$

where:

ln indicates the natural log;

SALRY equals the average annual salary of teachers in public elementary and secondary schools in constant 1982–84 dollars;

CUREXP equals current expenditures of public elementary and secondary schools per pupil in average daily attendance in constant 1982–84 dollars;

ADAPOP equals the ratio of average daily attendance to the population;

ADA1 equals the average daily attendance lagged 1 period; and

ADA2 equals the average daily attendance lagged 2 periods.

The model was estimated using the period from 1959–60 to 1992–93 as a sample period. The AR1 model for correcting for autocorrelation was used as the Durbin-Watson statistic was in the inconclusive region when the model was estimated using OLS.

While there are values for teacher salaries through 1994–95, the model was estimated using the period from 1959–60 to 1992–93 as there are values for current expenditures only through 1992–93. The actual values for teacher salaries for 1993–94 and 1994–95, not those estimated using the model, appear in table 36. The projected values for teacher salaries for the projections period from 1995–96 to 2005–2006 also are not the numbers which appear in table 36. Rather, three new sets of projections for teacher salaries were calculated using the per cent changes from the original projections. First, for each set of alternative projections, the projected percent change from 1994–95 to 1995–96 was applied to the actual number for 1994–95 to find a new projection for 1995–96. The projected percent changes were then used to produce three new series of teacher salary projections.

Due to the effects caused by the change shown in survey forms, the values for current expenditures for 1959–60 to 1987–88 were increased by 1.4 percent.

The results for this model are also shown in table A5.1.

There is no literature for comparing the sizes of the coefficients. However, the direction of the impact each variable has on salaries is as expected: As the level of spending per pupil increases (higher CUREXP), more teachers can be hired, so demand for teachers increases and salaries may increase; as the number of students increases (higher ADAPOP and ADA1/ADA2), demand for teachers increases, so salaries increase.

This is the first edition of the *Projections of Education Statistics* that this model has been used to projection projections of teacher salaries. In the previous seven editions, similar models were used. The greatest difference between the model used here and those used in earlier editions is that in the model presented here, the variables were in log form.

As with current expenditures, three different scenarios are presented for teacher salaries. The same projections for ADAPOP and ADA are used for each alternative projection; the sole difference between the projections is in the projection for current expenditures. The middle alternative projection for salaries uses the middle alternative projection for current expenditures. The low alternative projection for salaries uses the low alternative projection for current expenditures. The high alternative projection for salaries uses the high alternative projection for current expenditures.

Current expenditures, average teacher salaries, and the number of teachers are interrelated. Hence, an exercise was conducted to see whether the projections of these three time series were consistent.

The number of teachers was multiplied by the average salary and then divided by current expenditures for every school year from 1980–81 until 2005–2006 (using the middle alternative projection for teachers, salaries, and current expenditures). The resulting value shows the portion of current expenditures that is spent on teacher salaries. The portion of current expenditures that goes toward teacher salaries has been in a slow downward trend, with the teacher salary share falling from 40.9 percent in 1980–81 to 38.9 percent in 1992–93. With the projected values, the portion of current expenditures that go toward teacher salaries continues to fall slowly, falling to 35.4 percent in 2005–2006.

The results of this exercise indicate that the projections of these three time series are consistent.

Projection Accuracy

This is the eighth consecutive year in which *Projections of Education Statistics* has contained projections of current expenditures and teacher salaries. The actual values of current expenditures and teacher salaries can be compared with the projected values in the previous editions to examine the accuracy of the models.

The projections from the various editions of *Projections of Education Statistics* were placed in 1981–82 dollars using the Consumer Price Indices that appeared in each edition.

The same set of the independent variables has been used in the production of the current expenditure projections presented in the last eight editions of the *Projections of Education Statistics* including this one. There have been some differences in the construction of the variables however. First, with the *Projections of Education Statistics to 1997-98*, calendar year data were used for disposable income, the population, and the Consumer Price Index. With the later editions, school year data was used. Second, beginning with *Projections of Education Statistics to 2004* there was a change in the definition of disposable income. Third, there has been two changes with the population variable. Beginning with the last edition, the Census's July 1 number for the population has been used. In the

earlier editions, an average of the the quarterly values was used. Also beginning with the last edition, the U.S. Bureau of the Census's population projections have been used. In the earlier editions, the population projections came from a economic consulting firm, either DRI-McGraw/Hill or the WEFA Group.

There has also been a change in the estimation procedure. In *Projections of Education Statistics to 2003*, *Projections of Education Statistics to 2004*, *Projections of Education Statistics to 2005*, and in the present edition, the AR1 model for correcting for autocorrelation was used to estimate the model. In the earlier four editions, ordinary least squares was used to estimate the model.

Mean absolute percentage errors (MAPEs) for current expenditures and current expenditures per pupil can be found on table A5.2.

For some editions of the *Projections of Education Statistics*, the first projection to be listed was not actually a 1-year-out projection. For example, in *Projections of Education Statistics to 2002*, the first projection to appear was for 1990–91. This projection was calculated using a sample period ending in 1988–89 and so was considered to be a 2-year-out projection. The value that appeared for 1989–1990 was from NCES *Early Estimates*. Only those projections which appeared in an edition of *Projections of Education Statistics* were used in this evaluation.

Some of the differences between the actual values and the projected values for current expenditures and current expenditures per pupil are due to the change in the survey form for current expenditures that took place in 1988–89. The results of the crosswalk study suggest that values for current expenditures as presently collected are approximately 1.4 percent higher than they would have been if no change had been made. If the projections for 1988–89, 1989–90, and 1990–91 which appeared in *Projections of Education Statistics to 1997–98*, *Projections of Education Statistics to 2000*, *Projections of Education Statistics to 2001: An Update*, are increased by 1.4 percent, the MAPEs decrease. MAPEs for current expenditures and current expenditures per pupil after this adjustment has been made can also be found on table A5.2.

Projections for teacher salaries also appeared in the seven most recent editions of *Projections of Education Statistics*.

There was one major difference with the model used to teacher salary projections in this edition and the models used all the earlier editions- all the variables were placed in log form in this edition. With this change in functional form, there was also a change in the way the change in enrollment was measured. In this edition, the change enrollment was measured by taking the ratio of the average daily attendance lagged one period to the average daily attendance lagged two periods. In the previous three editions of *Projections of Education Statistics*, the change in enrollment was measured by the change in average daily attendance lagged one period. In *Projections of Education Statistics to 1997-98*, *Projections of Education Statistics to 2000*, and *Projections of Education Statistics to 2001*, both the change in average daily attendance lagged one period, and the change in average daily attendance lagged two periods were included in the model.

There was a major difference between the model used to produce the teacher salary projections in *Projections of Education Statistics to 1997–98* and those used in the later editions including this one: variables in the model were calculated using calendar year data for the population and the Consumer Price Index rather than school year data.

The MAPEs for projections of teacher salaries can also be found on table A5.2

Sources of Past and Projected Data

Numbers from several different sources were used to produce these projections. In some instances, the time series used were made by either combining numbers from various sources or manipulating the available numbers. The sources and the methods of manipulation are described here.

The time series used for current expenditures was compiled from several different sources. For the school years ending in even numbers from 1959–60 to 1975–76, the numbers for current expenditures were taken from various issues of *Statistics of State School Systems*, published by NCES. The numbers for the school years ending in odd numbers during the 1960s were taken from various issues of the National Education Association's *Estimates of School Statistics*. For the school years ending in odd numbers during the 1970s, up to and including 1976–77, the numbers were taken from various issues of *Revenues and Expenditures for Public Elementary and Secondary Education*, published by NCES. For the school years from 1977–78 until 1992–93, the numbers were taken from the NCES Common Core of Data survey and unpublished data.

For 1974–75 and 1976–77, expenditures for summer schools were subtracted from the published figures for current expenditures. The value for 1972–73 was the sum of current expenditures at the local level, expenditures for administration by state boards of education and state departments of education, and expenditures for administration by intermediate administrative units.

Note that although the data from the different sources are similar, they are not entirely consistent. Also, the NCES numbers beginning with 1980–81 are not entirely consistent with the earlier NCES numbers, due to differing treatments of items such as expenditures for administration by state governments and expenditures for community services.

An alternative source for current expenditures would have been the Bureau of the Census' F-33 which offers statistics to the district level. This level of detail was not needed however.

For most years, the sources for the past values of average daily attendance were identical to the sources for current expenditures. For 1978–79, the number was taken from *Revenues and Expenditures for Public Elementary and Secondary Education*.

Projections for average daily attendance for the period from 1993–94 to 2005–2006 were made by multiplying

the projections for enrollment by the average value of the ratios of average daily attendance to the enrollment from 1983–84 to 1992–93; this average value was approximately 0.93.

The values for fall enrollment from 1959–60 to 1977–78 were taken from issues of the NCES publication *Statistics of Public Elementary and Secondary Schools*. The 1978–79 value was taken from the *NCES Bulletin* of October 23, 1979, "Selected Public and Private Elementary and Secondary Education Statistics." The values from 1979–80 to 1993–94 were taken from the NCES Common Core of Data survey. The projections for fall enrollment are those presented in Chapter 1.

For 1959–60 to 1992–93, the sources for revenue receipts from state sources were the two NCES publications *Statistics of State School Systems* and *Revenues and Expenditures for Public Elementary and Secondary Education* and the NCES Common Core of Data survey. The methods for producing the alternative projections for revenue receipts from state sources are outlined above.

The numbers for average teacher salaries were taken from various issues of the National Education Association's *Estimates of School Statistics*.

The projected values for disposable income, personal taxes and nontax receipts to state and local governments, and indirect business taxes and tax accruals to state and local governments, were developed using DRI/McGraw-Hill's U.S. Quarterly Model. Projected values of the Bureau of Labor Statistic's Consumer Price Index for all urban consumers, which was used for adjusting current expenditures, teacher salaries, revenue receipts from state sources, and the state revenue variables, were also developed using the U.S. Quarterly Model. DRI/McGraw-Hill supplied the historic values for these variables.

Both the historic and projected values for the population were supplied by the U.S. Bureau of the Census.

The values of all the variables from DRI were placed in school-year terms. The school-year numbers were calculated by taking the average of the last two quarters of 1 year and the first two quarters of the next year.

The Elementary and Secondary School Price Index was considered as a replacement for the Consumer Price Index for placing current expenditures and teacher salaries in constant dollars. As projections of the price index are required for placing the forecasts into current dollars, and as there are no projections of the Elementary and Secondary School Price Index, the Consumer Price Index was used. There are other price indexes, such as the implicit price deflator for state and local government purchases, that could have been used instead of the Consumer Price Index. These alternatives would have produced somewhat different projections.

Table A5.1.—Equations for current expenditures per pupil in average daily attendance, average annual salaries of teachers, and education revenue receipts from state sources

Dependent variable	Equation	R^2	Durbin-Watson statistic	Estimation technique *	Rho
Current expenditures per pupil	ln(CUREXP) = - 1.704 + 0.612ln(PCI) + 0.605ln(SGRNT) (-1.30) (2.59) (4.60) - 0.338ln(ADAPOP) (-2.63)	0.997	1.913	AR1	0.416 (2.45)
Average annual salaries	ln(SALRY) = 7.51 + 0.46ln(CUREXP) + 0.67ln(ADAPOP) (32.6) (12.07) (5.65) + 1.27ln(ADA1/ADA2) (3.59)	0.981	1.615	AR1	0.818 (6.93)
Education revenue receipts from state sources per capita	ln(SGRNT) = - 0.26 + 0.33ln(PERTAX1) + 0.63ln(BUSTAX1) (-0.27) (1.91) (2.22) + 0.34ln(ADAPOP) (3.41) - 0.03ln(RCPIANN/RCPIANN1) (-2.17)	0.992	1.978	AR1	.251 (1.31)

* OLS = Ordinary Least Squares. AR1 is an estimation procedure for correcting the problem of first-order autocorrelation.

NOTES: The sample size for revenue receipts from state sources is 33. The sample size for current expenditures and teacher salaries is 34. Numbers in parentheses are t-statistics. R^2 = Coefficient of determination, adjusted for degrees of freedom. For an explanation of the Durbin-Watson statistic, see J. Johnston, *Econometric Methods*, New York: McGraw-Hill, 1972, pages 251–252. Rho is the first order autocorrelation coefficient estimated when AR1 is used. (This table was prepared October 1995.)

Table A5.2.—Mean absolute percentage errors by lead time for current expenditure in public elementary and secondary schools, current expenditures per pupil in average daily attendance (ADA) in public elementary and secondary schools, and average annual teacher salaries of classroom teachers in public elementary and secondary schools, all in constant dollars

Lead Time	Mean absolute percentage errors				
	Current Expenditures		Current Expenditures - Adjusted [1]		Average annual salaries
	Total	Per pupil in ADA	Total	Per pupil in ADA	
One	1.3%	1.2%	0.8%	0.6%	1.3%
Two	2.4%	1.7%	1.6%	1.1%	1.6%
Three	1.9%	1.6%	1.5%	1.4%	2.3%
Four	1.4%	1.7%	1.1%	2.1%	4.8%
Five	0.5%	1.1%	1.2%	2.5%	7.7%
Six	2.0%	2.4%	3.4%	3.9%	9.6%
Seven	—	—	—	—	11.1%
Eight	—	—	—	—	14.1%

[1] Values for current expenditures and current fund expenditures per pupil in average daily attendance from *Projections of Education Statistics to 1997–98*, *Projections of Education Statistics to 2000*, and *Projections of Education Statistics to 2001: An Update* were increased by 1.4 percent in compensate for the change in the survey for for current expenditures which occurred in 1988–89.

SOURCES: Various issues of *Projections of Education Statistics*. (This table was prepared October 1995.)

A6. Expenditures of Institutions of Higher Education

A total of six higher education expenditure models was estimated: one current-fund expenditure model and one educational and general expenditure model for each of the three types of higher education institutions—public 4-year; public 2-year; and private 4-year. In each case, econometric techniques were used. Due to the lack of a consistent database for private 2-year schools, the last actual value, for 1992–93, was used.

The higher education econometric models were selected on the basis of their statistical properties, such as the coefficients of determination (R^2), the t-statistics of the variables, the Durbin-Watson statistic, and residual plots. These econometric models will yield good forecasting results only if the relationships that existed among the variables in the past continue throughout the projection period.

Higher Education Institutions Expenditure Models

Similar econometric models were developed for three types of institutions. While there has been significantly less work by economists studying the factors influencing higher education finance data than those influencing elementary and secondary finance data, there have been some valuable studies. This body of work was used in building these models.

In Chapter 7, some of the factors that are historically associated with the level of expenditures were discussed. These were: (1) the state of the economy; (2) the inflation rate; and (3) enrollments. Each of the models presented here contains variables measuring at least two of these three factors. Either disposable income per capita or revenues of state and local governments per capita was used to measure the state of the economy. Two measures of the inflation rate were considered: the rate of change in the inflation rate; or a dummy for years with inflation rates greater than 8 percent. In each equation, an enrollment variable was included.

For each dependent variable, a number of alternative specifications were examined. In each case, the choice of the final specification was made after considering such factors as the coefficients of determination, the t-statistics of the variables, residual plots, and ex-post mean absolute percent errors. The final specification of each model has the dependent variables and some of the independent variables as first differences.

The Public 4-Year Institutions Expenditure Models

The public 4-year institutions current-fund expenditure model is:

$$\text{DPUTCUR4} = b_0 + b_1\text{DSTREV1} + b_2\text{DPUFTE4} + b_3\text{DUMMY}$$

where:

DPUTCUR4 is the change in current-fund expenditures per student in full-time-equivalent (FTE) enrollment in public 4-year institutions in constant 1982–84 dollars;

DSTREV1 is the change in the sum of personal tax and nontax receipts to state and local governments and indirect business taxes and tax accruals, excluding property taxes, to state and local governments, per capita, in constant 1982–84 dollars lagged one year;

DPUFTE4 is the change in FTE enrollment in public 4-year institutions in thousands of students; and

DUMMY is a dummy variable equaling 1 when the inflation rate is greater than 8 percent and 0 otherwise.

This model and the other econometric models were estimated using a sample period from 1968–69 to 1992–93. Ordinary least squares was used to estimate all the public institution models.

The results for this model are on table A6.1. Each variable affects current-fund expenditures in a logical fashion. The more revenues that state and local governments receive, the more expenditures they can make for public institutions of higher education. In a year with high inflation (DUMMY equals 1), current-fund expenditures in constant dollars are lower than they would have been otherwise. The more students in public 4-year institutions, the less money to be spent per student.

Three projections were produced: the middle alternative set of projections, the low alternative set of projections, and the high alternative set of projections. Each set of projections was based on a different set of assumptions for the revenues of state and local governments per capita. The projections for revenues of state and local governments per capita and the other economic variables used to produced the higher education expenditure projections were produced using the U.S. Quarterly Model of DRI/McGraw–Hill's (DRI). The development of these alternative sets of projections is discussed in Appendix A5.

In the middle set of alternative projections, the revenues of state and local governments per capita increase at rates

between 1.0 percent and 2.5 percent. In the low set of alternative projections, the revenues of state and local governments per capita increase at rates between 0.2 percent and 1.6 percent. In the high set of alternative projections, the revenues of state and local governments per capita increase at rates between 1.4 percent and 3.5 percent.

Projections for total current-fund expenditures were made by multiplying the projections for current-fund expenditures per student in FTE enrollment by projections for FTE enrollment. Projections were developed in 1982–84 dollars and then placed in 1993–94 dollars using projections for the Consumer Price Index. Current dollar projections were produced by multiplying the constant dollar projections by projections for the Consumer Price Index. All the higher education total expenditure projections, all expenditure projections in 1993–94 dollars, and all the current dollar projections were calculated in similar fashion.

A model for educational and general expenditures of public 4-year institutions was developed using the same variables as the current-fund expenditure model. The model is:

$$DPUED4 = b_0 + b_1 DSTREV1 + b_2 DPUFTE4 + b_3 DUMMY$$

where:

DPUED4 is the change in educational and general expenditures per student in FTE enrollment in public 4-year institutions in constant 1982–84 dollars.

As with current-fund expenditures, each variable affects expenditures in the expected way.

The Public 2-Year Institutions Expenditure Models

The public 2-year institutions current-fund expenditure model has a form similar to the public 4-year institutions current-fund expenditure model except that the public 2-year institutions model does not contain any inflation variables. The model is:

$$DPUTCUR2 = b_0 + b_1 DSTREV1 + b_2 DPUFTE2$$

where:

DPUTCUR2 is the change in current-fund expenditures per student in FTE enrollment in public 2-year institutions in constant 1982–84 dollars; and

DPUFTE2 is the change in FTE enrollment in public 2-year institutions in thousands of students.

The results for this model are on table A6.1. Again, the DSTREV1 has the expected positive effect on expenditures and the FTE enrollment variable has the expected negative impact.

The public 2-year institutions educational and general expenditure model is virtually identical to its current-fund expenditures counterpart. It is:

$$DPUED2 = b_0 + b_1 DSTREV1 + b_2 DPUFTE2$$

where:

DPUED2 is the change in educational and general expenditures per student in FTE enrollment in public 2-year institutions in constant 1982–84 dollars.

The Private 4-Year Institutions Expenditure Models

The private 4-year institutions current-fund expenditure model is:

$$DPRTCUR4 = b_0 + b_1 DPCI + b_2 DPRFTE4 + b_3 ININCR$$

where:

DPRTCUR4 is the change in current-fund expenditures per student in FTE enrollment in private 4-year institutions in constant 1982–84 dollars;

DPCI is the change in disposable income per capita in 1987 dollars;

DPRFTE4 is the change in FTE enrollment in private 4-year institutions to the population in thousands; and

ININCR is the rate of change in the inflation rate measured by the Consumer Price Index.

The model was estimated using a method for correcting for autocorrelation.

The three alternative sets of projections for current-fund expenditures were produced using varying assumptions about the growth paths for disposable income and the rate of change in the inflation rate measured by the Consumer Price Index. These disposable income and inflation rate projections were also developed using the U.S. Quarterly Model of DRI/McGraw-Hill.

In the middle set of projections, disposable income per capita rises each year from 1995–96 to 2005–2006 at rates between 1.1 percent and 1.7 percent. In the low set of projections, disposable income per capita increases at rates between 0.1 percent and 1.6 percent. In the high set of projections, disposable income per capita increases at rates between 1.4 percent and 2.3 percent.

In the middle set of projections, the inflation rate varies between 3.0 percent and 4.1 percent. In low set of projections, it varies between 3.5 percent and 5.1 percent, and in the high set of projections, it varies between 2.5 percent and 4.1 percent for the high alternative.

The private 4-year institutions educational and general expenditure model is:

$$DPRIED4 = b_0 + b_1 DPCI + b_2 DPRFTE4 + b_3 ININCR$$

where:

DPRIED4 is the change in educational and general expenditures per student in FTE enrollment in private 4-year institutions in constant 1982–84 dollars.

The Private 2-Year Institutions Expenditure Models

Unlike the other higher education variables, econometric methods were not used for either private 2-year current-fund expenditures or private 2-year educational and general expenditures. This was due to a change in the sample universe for private 2-year institutions. The period for which the private 2-year universe is relatively consistent, from 1982–83 to 1992–93, has only eleven observations. This is too short a period for econometric techniques, so another means of projecting private 2-year institution expenditures was required. Hence, both current-fund expenditures per student and educational and general expenditures per student were assumed to stay constant at the last year for which there is data, 1992–93.

Projection Accuracy

This is the fifth time in the past ten years that *Projections of Education Statistics* has contained projections of higher education expenditure data. The other four editions were the *Projections of Education Statistics to 2005*, *Projections of Education Statistics to 2004*, *Projections of Education Statistics to 2003* and *Projections of Education Statistics to 2000*. The projections that appeared in the three most recent editions *Projections of Education Statistics* were developed using the same methodology as those presented here. Those that appeared in *Projections of Education Statistics to 2000* were produced using different models.

Mean absolute percentage errors (MAPEs) were for current-fund expenditures and educational and general expenditures can be found on table A6.2. Two alternative sets of MAPEs are presented: with one set, the projections from the last three editions of the *Projections of Education Statistics to 2000* were used in the calculations; with the other, the projections from the *Projections of Education Statistics to 2000* were also included.

Sources of Data

The current-fund expenditure data and the educational and general expenditure data are from the "Financial Statistics of Institutions of Higher Education" and the Integrated Postsecondary Education Data System (IPEDS), "Finance" surveys of the National Center for Education Statistics (NCES). One manipulation of the educational and general expenditures numbers was required. From 1968–69 to 1973–74, student-aid expenditures were a separate component of current-fund expenditures. From 1974–75 on, scholarships and fellowships have been a component of educational and general expenditures. Hence, for the period 1968–69 to 1973–74, student aid was added to the published numbers for educational and general expenditures.

The full-time-equivalent (FTE) enrollment data are from the "Fall Enrollment in Colleges and Universities" surveys of NCES. The FTE enrollment figures for 1968–69, 1969–70, and 1970–71 were estimated using part-time and full-time enrollment data. Full-time-equivalent enrollment was derived by adding one-third of the part-time students to the number of full-time students.

The projected values for disposable income and the revenues of state and local governments per capita were developed using DRI/McGraw-Hill's U.S. Quarterly Model. Projected values of the Bureau of Labor Statistic's Consumer Price Index for all urban consumers, which were used for adjusting the higher education finance data, and the implicit price deflator for personal consumption expenditures, which was used for adjusting disposable income per capita, were also developed using the U.S. Quarterly Model. DRI/McGraw-Hill supplied the historic values for these variables.

Both the historic and projected values for the population were supplied by the U.S. Bureau of the Census.

The Higher Education Price Index was considered as a replacement for the Consumer Price Index for placing the higher education expenditures in constant dollars. As projections of the price index are required for placing the forecasts into current dollars, and as there are no projections of the Higher Education Price Index, the Consumer Price Index was used.

The values of all of the variables from DRI were placed in academic-year terms. The data were available in quarterly format so the academic-year numbers were calculated by taking the average of the last 2 quarters of 1 year with the first 2 of the next year.

Table A6.1.—Equations for current-fund expenditures per student in full-time-equivalent enrollment and educational and general expenditures per student in full-time-equivalent enrollment in public 4-year institutions, public 2-year institutions, and private 4-year institutions

Dependent variable	Equation	R^2	Durbin-Watson statistic	Estimation technique [1]	Rho
Current-fund expenditures per student in public 4-year institutions	DPUTCUR4 = 287 + 2.19DSTREV1 - 0.002DPUFTE4 (5.34) (2.20) (-5.65) - 237DUMMY (-3.50)	0.701	1.88	OLS	
Current-fund expenditures per student in public 2-year institutions	DPUTCUR2 = 9.8 + 3.46DSTREV1 - 0.001DPUFTE2 (0.30) (4.96) (-3.88)	0.734	2.23	OLS	
Current-fund expenditures per student in private 4-year institutions	DPRTCUR4 = 474 + 0.34DPCI - 0.008DPRFTE4 (3.59) (1.61) (-5.33) - 485.3ININCR (-5.14)	0.742	1.90	AR1	0.72 (4.75)
Educational and general expenditures per student in public 4-year institutions	DPUED4 = 237 + 1.96DSTREV1 - 0.002DPUFTE4 (4.26) (1.89) (-5.78) - 226DUMMY (-3.21)	0.687	1.66	OLS	
Educational and general expenditures per student in public 2-year institutions	DPUED2 = 0.54 + 3.59DSTREV1 - 0.0006DPUFTE2 (0.01) (4.71) (-2.81)	0.669	1.93	OLS	
Educational and general expenditures per student in private 4-year institutions	DPRIED4 = 173.7 + 0.46DPCI - 0.004DPRFTE4 (1.31) (1.53) (-1.88) - 414.7ININCR (-3.1)	0.568	2.29	AR1	0.46 (2.93)

[1] OLS = Ordinary Least Squares. AR1 is an estimation procedure for correcting the problem of first-order autocorrelation. For a general discussion of the problem of autocorrelation, and the methods to correct it, see Johnston (1972), chapter 8. For a discussion of the method used to forecast in the presence of autocorrelation, see G. Judge, W. Hill, R. Griffiths, H. Lutkepohl, and T. Lee, *The Theory and Practice of Econometrics*, New York: John Wiley and Sons, 1985, pages 315–318.

NOTES: The sample size in for each case is 25. Numbers in parentheses are t-statistics. R^2 = Coefficient of determination, adjusted for degrees of freedom. For an explanation of the Durbin-Watson statistic, see J. Johnston, *Econometric Methods*, New York: McGraw-Hill, 1972, pages 251–252. Rho is the first order autocorrelation coefficient estimated when AR1 is used. (This table was prepared November 1995.)

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Table A6.2.—Mean absolute percentage errors by lead time for current-fund expenditures and educational and general expenditures in constant dollars in public and private institutions of higher education by type

Lead Time	Mean absolute percentage errors								
	Total	Public					Private		
		Total	4-year		2-year		Total	4-year	
			Total	Per student in FTE	Total	Per student in FTE		Total	Per student in FTE
Current-fund expenditures									
Last three editions [1]									
One	0.3%	0.4%	0.4%	0.6%	1.1%	0.8%	0.5%	0.7%	0.7%
Two	0.4%	0.4%	0.6%	1.6%	5.0%	1.9%	0.9%	0.9%	2.1%
Three	0.5%	0.4%	1.0%	1.1%	6.7%	2.3%	0.6%	0.5%	1.1%
Four editions [2]									
One	1.1%	0.9%	1.2%	1.3%	1.3%	1.2%	1.7%	1.8%	1.7%
Two	1.4%	0.6%	1.1%	1.8%	5.1%	3.0%	3.2%	3.2%	3.9%
Three	1.5%	0.2%	1.0%	1.2%	5.5%	4.4%	3.6%	3.5%	2.8%
Four	5.5%	3.4%	4.3%	1.3%	0.8%	6.9%	9.2%	9.3%	7.4%
Five	6.5%	4.3%	5.2%	0.6%	0.4%	7.3%	10.2%	10.3%	7.7%
Six	6.8%	4.4%	5.3%	0.7%	0.5%	17.1%	11.0%	11.0%	5.9%
Educational and general expenditures									
Last three editions [1]									
One	0.1%	0.4%	0.7%	1.0%	1.0%	0.8%	0.8%	0.9%	0.9%
Two	0.3%	0.7%	1.3%	1.3%	5.2%	1.7%	1.7%	1.7%	2.6%
Three	1.0%	0.3%	2.3%	0.2%	7.1%	1.8%	3.4%	3.3%	3.9%
Four editions [2]									
One	1.0%	0.8%	1.3%	1.5%	1.4%	1.2%	2.3%	2.3%	2.3%
Two	1.4%	0.6%	1.6%	1.6%	5.2%	2.9%	4.1%	4.0%	4.6%
Three	1.8%	0.2%	1.6%	0.7%	5.8%	4.2%	5.5%	5.4%	4.7%
Four	6.0%	3.4%	4.6%	1.6%	1.0%	7.1%	10.7%	10.8%	8.9%
Five	6.5%	3.6%	4.5%	0.2%	0.2%	7.4%	12.1%	12.2%	9.6%
Six	6.3%	2.7%	3.4%	2.7%	0.1%	17.6%	12.8%	12.8%	7.8%

[1] *Projections of Education Statistics to 2003*, *Projections of Education Statistics to 2004*, and *Projections of Education Statistics to 2005*.

[2] *Projections of Education Statistics to 2000*, *Projections of Education Statistics to 2003*, *Projections of Education Statistics to 2004*, and *Projections of Education Statistics to 2005*. The projections presented in the *Projections of Education Statistics to 2000* were calculated using significantly different models than those presented in later editions including this one.

SOURCES: Various issues of *Projections of Education Statistics*. (This table was prepared October 1995.)

Appendix B

Supplementary Tables

Table B1.—Annual number of births: 50 States and D.C., 1946 to 2006

(In thousands)

Calendar Year	Number of Births
1946	3,426
1947	3,834
1948	3,655
1949	3,667
1950	3,645
1951	3,845
1952	3,933
1953	3,989
1954	4,102
1955	4,128
1956	4,244
1957	4,332
1958	4,279
1959	4,313
1960	4,307
1961	4,317
1962	4,213
1963	4,142
1964	4,070
1965	3,801
1966	3,642
1967	3,555
1968	3,535
1969	3,626
1970	3,739
1971	3,556
1972	3,258
1973	3,137
1974	3,160
1975	3,144
1976	3,168
1977	3,327
1978	3,333
1979	3,494
1980	3,612
1981	3,629
1982	3,681
1983	3,639
1984	3,669
1985	3,761
1986	3,757
1987	3,809
1988	3,910

Table B1.—Annual number of births:—Continued 50 States and D.C., 1946 to 2006

(In thousands)

Calendar Year	Number of Births
1989	4,041
1990	4,148
1991	4,111
1992	4,065
1993	4,039
1994	3,949
	Projected
1995	—
1996	—
1997	—
1998	—
1999	—
2000	—
2001	—
2002	—
2003	—
2004	—
2005	—
2006	—

NOTE: Projections of the annual number of births are not shown because the U.S. Bureau of the Census has not released its latest birth projections. After the U.S. Bureau of the Census has released the birth projections, these numbers will be available upon request.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "U.S. Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1991," *Current Population Reports*, Series P-25, No. 1095, February 1993; National Center for Health Statistics (NCHS), *Monthly Vital Statistics Reports*; and unpublished tabulations. (This table was prepared September 1995.)

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Table B2.—Preprimary school-age populations: 50 States and D.C., 1981 to 2006

(In thousands)

Year (July 1)	3 years old	4 years old	5 years old	3-5 years old
1981	3,261	3,274	3,129	9,664
1982	3,361	3,297	3,274	9,932
1983	3,479	3,398	3,296	10,173
1984	3,527	3,518	3,397	10,442
1985	3,566	3,568	3,518	10,652
1986	3,578	3,609	3,568	10,755
1987	3,509	3,623	3,610	10,742
1988	3,620	3,556	3,627	10,803
1989	3,646	3,669	3,559	10,874
1990	3,658	3,697	3,679	11,034
1991	3,718	3,717	3,701	11,136
1992	3,812	3,778	3,722	11,312
1993	3,968	3,878	3,788	11,634
1994	3,990	4,032	3,883	11,905
		Projected		
1995	—	—	—	—
1996	—	—	—	—
1997	—	—	—	—
1998	—	—	—	—
1999	—	—	—	—
2000	—	—	—	—
2001	—	—	—	—
2002	—	—	—	—
2003	—	—	—	—
2004	—	—	—	—
2005	—	—	—	—
2006	—	—	—	—

NOTE: Projections for the population are not shown because the U.S. Bureau of the Census has not released its latest population projections. After the U.S. Bureau of the Census has released the population projections, these numbers will be available upon request.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "U.S. Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1991," *Current Population Reports*, Series P-25, No. 1095, February 1993 and unpublished tabulations. (This table was prepared September 1995.)

Table B3.—School-age populations, ages 5, 6, 5–13, and 14–17 years: 50 States and D.C., 1981 to 2006

(In thousands)

Year (July 1)	5 years old	6 years old	5–13 years old	14–17 years old
1981	3,129	3,186	30,711	15,610
1982	3,274	3,133	30,528	15,057
1983	3,296	3,276	30,279	14,741
1984	3,397	3,297	30,061	14,726
1985	3,518	3,398	29,892	14,888
1986	3,568	3,518	30,078	14,824
1987	3,610	3,568	30,503	14,502
1988	3,627	3,611	31,029	14,023
1989	3,559	3,625	31,413	13,536
1990	3,679	3,561	31,996	13,310
1991	3,701	3,681	32,495	13,421
1992	3,722	3,706	33,089	13,653
1993	3,788	3,730	33,492	13,927
1994	3,883	3,792	33,862	14,429
		Projected		
1995	—	—	—	—
1996	—	—	—	—
1997	—	—	—	—
1998	—	—	—	—
1999	—	—	—	—
2000	—	—	—	—
2001	—	—	—	—
2002	—	—	—	—
2003	—	—	—	—
2004	—	—	—	—
2005	—	—	—	—
2006	—	—	—	—

NOTE: Projections for the population are not shown because the U.S. Bureau of the Census has not released its latest population projections. After the U.S. Bureau of the Census has released the population projections, these numbers will be available upon request.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "U.S. Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1991," *Current Population Reports*, Series P-25, No. 1095, February 1993 and unpublished tabulations. (This table was prepared September 1995.)

Table B4.—College-age populations, ages 18, 18–24, 25–29, 30–34, and 35–44 years: 50 States and D.C., 1981 to 2006

(In thousands)

Year (July 1)	18 years old	18–24 years old	25–29 years old	30–34 years old	35–44 years old
1981	4,186	30,505	20,275	18,798	26,454
1982	4,136	30,433	20,816	18,781	28,095
1983	3,978	30,174	21,259	19,137	29,336
1984	3,774	29,706	21,584	19,576	30,575
1985	3,686	29,151	21,804	20,102	31,767
1986	3,623	28,467	22,018	20,552	33,081
1987	3,703	27,928	21,982	21,058	34,299
1988	3,803	27,585	21,868	21,470	35,258
1989	3,889	27,379	21,690	21,758	36,494
1990	3,603	27,036	21,357	21,991	37,848
1991	3,385	26,553	20,853	22,243	39,358
1992	3,313	26,085	20,267	22,321	39,952
1993	3,396	25,789	19,702	22,313	40,847
1994	3,352	25,381	19,246	22,236	41,718
			Projected		
1995	—	—	—	—	—
1996	—	—	—	—	—
1997	—	—	—	—	—
1998	—	—	—	—	—
1999	—	—	—	—	—
2000	—	—	—	—	—
2001	—	—	—	—	—
2002	—	—	—	—	—
2003	—	—	—	—	—
2004	—	—	—	—	—
2005	—	—	—	—	—
2006	—	—	—	—	—

NOTE: Projections for the population are not shown because the U.S. Bureau of the Census has not released its latest population projections. After the U.S. Bureau of the Census has released the population projections, these numbers will be available upon request.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "U.S. Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1991," *Current Population Reports*, Series P-25, No. 1095, February 1993 and unpublished tabulations. (This table was prepared September 1995.)

Table B5.—Average daily attendance (ADA) in public elementary and secondary schools, change in ADA, the population, and ADA as a proportion of the population: 50 States and D.C., 1980–81 to 2005–2006

Year ending	ADA [1] (in thousands)	Change in ADA	Population [2] (in millions)	ADA as a proportion of the the population [2]
1981	37,704	–585,167	227.7	0.166
1982	37,095	–609,092	230.0	0.161
1983	36,636	–458,784	232.2	0.158
1984	36,363	–272,890	234.3	0.155
1985	36,404	41,283	236.3	0.154
1986	36,523	118,842	238.5	0.153
1987	36,864	340,764	240.7	0.153
1988	37,051	186,840	242.8	0.153
1989	37,268	217,365	245.0	0.152
1990	37,799	531,224	247.3	0.153
1991	38,427	627,247	249.9	0.154
1992	38,961	534,240	252.6	0.154
1993	39,567	606,111	255.4	0.155
1994 [3]	40,335	767,667	258.1	0.156
1995 [4]	41,034	699,538	260.7	0.157
		Projected		
1996	41,819	784,923	—	—
1997	42,570	750,885	—	—
1998	43,163	592,825	—	—
1999	43,593	429,911	—	—
2000	43,943	349,873	—	—
2001	44,213	270,147	—	—
2002	44,431	218,169	—	—
2003	44,627	195,814	—	—
2004	44,749	122,226	—	—
2005	44,870	121,395	—	—
2006	44,993	122,847	—	—

[1] Projections of average daily attendance were made by multiplying the forecasts for enrollment reported earlier in this publication by the average value of the ratio average daily attendance to the enrollment from 1984 to 1993, approximately 0.93 percent.

[2] Projections for the population and ADA as a proportion of the population are not shown because the U.S. Bureau of the Census has not released its latest population projections. After the U.S. Bureau of the Census has released the population projections, these numbers will be available upon request.

[3] Average daily attendance is projected.

[4] Projected.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "U.S. Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1991," Series P–25, No. 1095, February 1994 and unpublished tabulations; U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*; Common Core of Data survey; and the Early Estimates survey; DRI/McGraw–Hill, "U.S. Quarterly Model." (This table was prepared October 1995.)

Table B6.—Disposable income per capita (in constant 1993–94 dollars),[1] with alternative projections: 50 states and D.C., 1980–81 to 2005–2006

Year ending	Disposable income per capita		
1981	$15,514	—	—
1982	15,617	—	—
1983	15,646	—	—
1984	16,309	—	—
1985	16,941	—	—
1986	17,205	—	—
1987	17,357	—	—
1988	17,613	—	—
1989	17,957	—	—
1990	18,070	—	—
1991	18,034	—	—
1992	18,097	—	—
1993	18,419	—	—
1994	18,621	—	—
1995[2]	19,167	—	—
	Middle alternative projections	**Low alternative projections**	**High alternative projections**
1996	19,492	$19,481	$19,527
1997	19,771	19,608	19,953
1998	20,006	19,626	20,370
1999	20,296	19,707	20,832
2000	20,569	19,805	21,254
2001	20,837	19,923	21,649
2002	21,088	20,051	22,009
2003	21,321	20,189	22,328
2004	21,579	20,366	22,655
2005	21,863	20,573	23,007
2006	22,163	20,797	23,377

[1] Based on the price deflator for personal consumption expenditures, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

SOURCE: DRI/McGraw-Hill, "U.S. Quarterly Model." (This table was prepared October 1995.)

Table B7.—Education revenue receipts from state source per capita (in constant 1993–94 dollars),[1] with alternative projections: 50 states and D.C. 1980–81 to 2005–2006

Year ending	Education revenue receipts from state sources per capita		
1981	$372	—	—
1982	354	—	—
1983	361	—	—
1984	369	—	—
1985	393	—	—
1986	415	—	—
1987	431	—	—
1988	437	—	—
1989	452	—	—
1990	457	—	—
1991	460	—	—
1992	456	—	—
1993	456	—	—
1994[2]	468	—	—
1995[2]	473	—	—
	Middle alternative projections	**Low alternative projections**	**High alternative projections**
1996	482	$480	$483
1997	491	488	493
1998	504	498	512
1999	512	499	523
2000	521	502	539
2001	527	504	549
2002	534	506	559
2003	539	509	568
2004	543	511	574
2005	548	515	580
2006	554	520	588

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*; Common Core of Data survey; and Early Estimates survey; and National Education Association, annual *Estimates of State School Statistics*. (Latest edition 1994–95. Copyright 1995 by the National Education Association. All rights reserved.) (This table was prepared October 1995.)

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Table B8.—Consumer Price Index (base year 1993–94), with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Consumer Price Index		
1981	0.592	—	—
1982	0.643	—	—
1983	0.671	—	—
1984	0.696	—	—
1985	0.723	—	—
1986	0.744	—	—
1987	0.761	—	—
1988	0.792	—	—
1989	0.829	—	—
1990	0.868	—	—
1991	0.916	—	—
1992	0.945	—	—
1993	0.975	—	—
1994	1.000	—	—
1995 *	1.029	—	—
	Middle alternative projections	**Low alternative projections**	**High alternative projections**
1996	1.059	1.065	1.057
1997	1.093	1.114	1.086
1998	1.128	1.168	1.112
1999	1.166	1.228	1.143
2000	1.205	1.289	1.175
2001	1.247	1.354	1.211
2002	1.291	1.422	1.250
2003	1.338	1.491	1.293
2004	1.388	1.564	1.340
2005	1.442	1.641	1.391
2006	1.501	1.722	1.448

* Projected.

SOURCE: DRI/McGraw-Hill "U.S. Quarterly Model." (This table was prepared October 1995.)

Table B9.—Rate of change for the inflation rate based on the Consumer Price Index, with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Rate of change for the inflation rate		
1981	-0.126	—	—
1982	-0.252	—	—
1983	-0.508	—	—
1984	-0.134	—	—
1985	0.059	—	—
1986	-0.259	—	—
1987	-0.231	—	—
1988	0.859	—	—
1989	0.100	—	—
1990	0.047	—	—
1991	0.148	—	—
1992	0.419	—	—
1993	-0.022	—	—
1994	-0.163	—	—
1995*	0.092	—	—
	Middle alternative projections	**Low alternative projections**	**High alternative projections**
1996	0.048	0.240	-0.028
1997	0.073	0.306	-0.027
1998	-0.007	0.055	-0.085
1999	0.045	0.040	0.100
2000	0.016	-0.010	0.040
2001	0.026	0.000	0.081
2002	0.026	-0.005	0.067
2003	0.018	-0.021	0.048
2004	0.025	-0.002	0.060
2005	0.044	0.005	0.057
2006	0.054	0.013	0.069

* Projected.

SOURCE: DRI/McGraw-Hill "U.S. Quarterly Model." (This table was prepared October 1995.)

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Table B10.—Personal tax and nontax payments to state and local governments, per capita (in constant 1993–94 dollars),[1] with alternative projections: 50 States and D.C. 1980–81 to 2005–2006

Year ending	Personal tax and nontax payments per capita		
1981	$443	—	—
1982	445	—	—
1983	459	—	—
1984	506	—	—
1985	530	—	—
1986	548	—	—
1987	592	—	—
1988	589	—	—
1989	613	—	—
1990	631	—	—
1991	624	—	—
1992	644	—	—
1993	653	—	—
1994	665	—	—
1995[2]	676	—	—
	Middle alternative projections	**Low alternative projections**	**High alternative projections**
1996	682	$684	$681
1997	699	697	704
1998	715	705	728
1999	731	713	751
2000	744	722	772
2001	757	730	791
2002	769	738	808
2003	780	746	824
2004	792	756	841
2005	806	766	859
2006	820	777	879

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

SOURCE: DRI/McGraw–Hill "U.S. Quarterly Model." (This table was prepared October 1995.)

Table B11.—Indirect business taxes and nontax accruals, excluding property taxes, for state and local governments, per capita (in constant 1993–94 dollars),[1] with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Indirect business taxes and nontax accruals per capita		
1981	$813	—	—
1982	798	—	—
1983	814	—	—
1984	884	—	—
1985	925	—	—
1986	970	—	—
1987	984	—	—
1988	997	—	—
1989	998	—	—
1990	1,006	—	—
1991	989	—	—
1992	1,000	—	—
1993	1,010	—	—
1994	1,023	—	—
1995[2]	1,039	—	—
	Middle alternative projections	**Low alternative projections**	**High alternative projections**
1996	1,060	$1,059	$1,063
1997	1,086	1,071	1,101
1998	1,100	1,066	1,132
1999	1,117	1,065	1,162
2000	1,130	1,066	1,185
2001	1,144	1,070	1,206
2002	1,155	1,074	1,223
2003	1,164	1,081	1,235
2004	1,175	1,090	1,248
2005	1,188	1,100	1,263
2006	1,200	1,112	1,279

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

SOURCE: DRI/McGraw-Hill, "U.S. Quarterly Model." (This table was prepared October 1995.)

Table B12.—Sum of personal tax and nontax payments and indirect business taxes and tax accruals, excluding property taxes, for state and local governments per capita (constant 1993–94 dollars),[1] with alternative projections: 50 States and D.C., 1980–81 to 2005–2006

Year ending	Tax and nontax payments per capita		
1981	$1,256	—	—
1982	1,242	—	—
1983	1,274	—	—
1984	1,390	—	—
1985	1,456	—	—
1986	1,518	—	—
1987	1,576	—	—
1988	1,586	—	—
1989	1,611	—	—
1990	1,636	—	—
1991	1,613	—	—
1992	1,643	—	—
1993	1,662	—	—
1994	1,688	—	—
1995[2]	1,715	—	—
	Middle alternative projections	**Low alternative projections**	**High alternative projections**
1996	1,742	$1,742	$1,744
1997	1,784	1,767	1,805
1998	1,815	1,770	1,860
1999	1,847	1,778	1,913
2000	1,874	1,788	1,957
2001	1,901	1,799	1,997
2002	1,924	1,813	2,031
2003	1,944	1,827	2,059
2004	1,967	1,845	2,089
2005	1,993	1,866	2,123
2006	2,020	1,889	2,157

[1] Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

[2] Projected.

SOURCE: DRI/McGraw–Hill "U.S. Quarterly Model." (This table was prepared October 1995.)

Appendix C

Data Sources

Sources and Comparability of Data

The information in this report was obtained from many sources, including Federal and state agencies, private research organizations, and professional associations. The data were collected by many methods, including surveys of a universe (such as all colleges) or of a sample, and compilations of administrative records. Care should be used when comparing data from different sources. Differences in procedures, such as timing, phrasing of questions, and interviewer training mean that the results from the different sources are not strictly comparable. More extensive documentation of one survey's procedures than of another's does not imply more problems with the data, only that more information is available.

Accuracy of Data

The accuracy of any statistic is determined by the joint effects of "sampling" and "nonsampling" errors. Estimates based on a sample will differ from the figures that would have been obtained if a complete census had been taken using the same survey instruments, instructions, and procedures. Besides sampling errors, both surveys, universe and sample, are subject to errors of design, reporting, processing, and errors due to nonresponse. To the extent possible, these nonsampling errors are kept to a minimum by methods built into the survey procedures. In general, however, the effects of nonsampling errors are more difficult to gauge than those produced by sampling variability.

Sampling Errors

The standard error is the primary measure of sampling variability. It provides a specific range—with a stated confidence—within which a given estimate would lie if a complete census had been conducted. The chances that a complete census would differ from the sample by less than the standard error are about 68 out of 100. The chances that the difference would be less than 1.65 times the standard error are about 90 out of 100. The chances that the difference would be less than 1.96 times the standard error are about 95 out of 100. The chances that it would be less than 2.58 times as large are about 99 out of 100.

The standard error can help assess how valid a comparison between two estimates might be. The standard error of a difference between two sample estimates that are uncorrelated is approximately equal to the square root of the sum of the squared standard errors of the estimates. The standard error (se) of the difference between sample estimate "a" and sample estimate "b" is:

$$se_{a-b} = (se_a^2 + se_b^2)^{1/2}$$

Note that most of the standard errors in subsequent sections and in the original documents are approximations. That is, to derive estimates of standard errors that would be applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. As a result, most of the standard errors presented provide a general order of magnitude rather than the exact standard error for any specific item.

Nonsampling Errors

Both universe and sample surveys are subject to nonsampling errors. Nonsampling errors are of two kinds—random and nonrandom. Random nonsampling errors may arise when respondents or interviewers interpret questions differently, when respondents must estimate values, or when coders, keyers, and other processors handle answers differently. Nonrandom nonsampling errors result from total nonresponse (no usable data obtained for a sampled unit), partial or item nonresponse (only a portion of a response may be usable), inability or unwillingness on the part of respondents to provide information, difficulty interpreting questions, mistakes in recording or keying data, errors of collection or processing, and overcoverage or undercoverage of the target universe. Random nonresponse errors usually, but not always, result in an understatement of sampling errors and thus an overstatement of the precision of survey estimates. Because estimating the magnitude of nonsampling errors would require special experiments or access to independent data, these magnitudes are seldom available.

To compensate for suspected nonrandom errors, adjustments of the sample estimates are often made. For example, adjustments are frequently made for nonresponse, both total and partial. An adjustment made for either type of nonresponse is often referred to as an imputation, that is, substitution of the "average" questionnaire response

for the nonresponse. Imputations are usually made separately within various groups of sample members that have similar survey characteristics. Imputation for item nonresponse is usually made by substituting for a missing item the response to that item of a respondent having characteristics that are similar to those of the nonrespondent.

Although the magnitude of nonsampling errors in the data used in this *Projections of Education Statistics* is frequently unknown, idiosyncrasies that have been identified are noted on the appropriate tables.

Federal Agency Sources

National Center for Education Statistics (NCES)

Common Core of Data

NCES uses the Common Core of Data (CCD) survey to acquire and maintain statistical data on the 50 states, the District of Columbia, and the outlying areas from the universe of state-level education agencies. Information about staff and students is collected annually at the school, LEA (local education agency or school district), and state levels. Information about revenues and expenditures is also collected at the state level.

Data are collected for a particular school year (July 1 through June 30) via survey instruments sent to the states by October 15 of the subsequent school year. States have 2 years in which to modify the data originally submitted.

Since the CCD is a universe survey, the CCD information presented in this edition of *Projections of Education Statistics* is not subject to sampling errors. However, nonsampling errors could come from two sources—nonreturn and inaccurate reporting. Almost all of the states submit the six CCD survey instruments each year, but submissions are sometimes incomplete or too late for publication.

Understandably, when 57 education agencies compile and submit data for over 85,000 public schools and approximately 15,000 local school districts, misreporting can occur. Typically, this results from varying interpretation of NCES definitions and differing recordkeeping systems. NCES attempts to minimize these errors by working closely with the Council of Chief State School Officers (CCSSO).

The state education agencies report data to NCES from data collected and edited in their regular reporting cycles. NCES encourages the agencies to incorporate into their own survey systems the NCES items they do not already collect so that those items will also be available for the subsequent CCD survey. Over time, this has meant fewer missing data cells in each state's response, reducing the need to impute data.

NCES subjects data from the education agencies to a comprehensive edit. Where data are determined to be inconsistent, missing, or out of range, NCES contacts the education agencies for verification. NCES-prepared state summary forms are returned to the state education agencies for verification. States are also given an opportunity to revise their state-level aggregates from the previous survey cycle.

Questions concerning the Common Core of Data can be directed to:

John Sietsema
Elementary/Secondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208

Early Estimates System. The early estimates system is designed to allow NCES to report selected key statistics early in the school year. The information is collected through contact with public school state education agencies and a sample of private schools. Details of the two systems follow.

The source of universe statistical information about public elementary and secondary education is the Common Core of Data (CCD)—data collected annually by NCES from state education agencies. These data are reported to NCES in March, undergo NCES and state editing, and become available for publication in September—full year after the beginning of the school year. High school graduate and fiscal data are reported a year later than student and teacher data. In contrast, the estimates included in this report are made in December of the school year to which they apply.

Fifty states, the District of Columbia, and three outlying areas participated in the public school early estimates survey in 1993. The estimates reported here were provided by state education agencies and represent the best information on public elementary and secondary schools available to states at this early stage of the school year. They are, however, subject to revision. The estimates for the remaining eight states and three outlying areas were imputed by NCES.

The source of universe statistical information on private schools in the United States is the Private School Survey. The private school universe consists of a diverse population of schools, including those with a religious orientation (for example, Catholic, Lutheran, and Jewish) as well as nonsectarian schools that include programs ranging from regular to special emphasis and special education. The private school early estimates is one reporting component of the universe collection. The basic statistical information included in this data system is collected from all private schools in the NCES universe, and the early estimates are based on a subsample of that universe.

NCES is continuing to examine and evaluate various methodologies to obtain better estimates and improve the data collection system for public and private elementary and secondary education. In the fall of 1992, the private school early estimates data were collected using Computer Assisted Telephone Interviewing, or CATI. This technique helps reduce errors in the data due to reporting or keying

error, and provides an on-line editing system that enables interviewers to verify inconsistent responses.

Questions concerning the Early Estimates System can be directed to:

Frank Johnson
Elementary/Secondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208

Private School Early Estimates System: 1988–89. The private school early estimates are the first reporting component of the Private School Universe data collection system. In subsequent years, the statistical information will be collected from all private schools in the NCES universe, and the early estimates will be based on a subsample of that universe.

Early in October 1988, questionnaires were mailed to a national probability sample of 1,167 private elementary and secondary schools from a universe of approximately 30,000 private schools. Telephone followup of nonrespondents was initiated in late October, and data collection was completed in late November. The overall response rate was 94 percent: 978 of the 1,035 eligible schools. Some 132 of the original 1,167 schools in the sample were determined to be out of scope. While this survey was not designed specifically to yield an estimate of the number of private schools, the number of out-of-scope schools identified in this survey resulted in a weighted estimate of approximately 26,300 private schools.

The sampling frame used for the survey was composed of two nonoverlapping frames: the NCES list frame of approximately 24,000 eligible schools, and an area frame developed by the Census Bureau for 75 Primary Sampling Units (PSUs). The area frame yielded a sample size of 523 schools for the Schools and Staffing Survey (SASS). The private school early estimates area sample was drawn from the SASS area sample. The sample from the area frame was sorted by level of school, by religious orientation class within school level, then by PSU within religious orientation class, and finally by student membership within PSU.

The sample from the list frame was stratified by level of school (elementary, secondary, combined, and other) and religious orientation (Catholic, other religious, and nonsectarian), and within strata, schools were further sorted by Office of Education regions, and by student membership size within region. Each school in the sorted frame was assigned a sampling measure of size equal to the square root of student membership, and samples were selected with probabilities proportionate to size from each orientation/level stratum.

The survey data were weighted to reflect the sampling rates (probability of selection) and were adjusted for nonresponse. Estimates of standard errors were computed using a variance estimation procedure for complex sample survey data known as jackknife. The standard errors for private school early estimates for school years 1987–88 and 1988–89 are shown in the table below.

Students (1988–89)	Teachers (1988–89)	Graduates (1987–88)
96,779.9	7,624.7	9,605.4

Nonsampling errors may include such things as differences in the respondents' interpretation of the meaning to the questions, differences related to the particular time the survey was conducted, or errors in data preparation. During the design of the survey and survey pretest, an effort was made to check for consistency of interpretation of questions and to eliminate ambiguous items. The questionnaire was pretested with respondents like those who completed the survey, and the questionnaire and instructions were extensively reviewed by NCES and representatives of private school associations attending the NCES private school data users meeting. Manual and machine editing of the questionnaires was conducted to check the data for accuracy and consistency. Extensive telephone followup was conducted for missing or inconsistent items; data were keyed with 100-percent verification.

Undercoverage in the list and area frames is another possible source of nonsampling error. The area frame was used to complement the list frame through the identification of schools missing from the list frame. As the Early Estimates System and the Private School Universe data collection system develop, efforts will be directed toward updating the universe list and identifying and minimizing sources of undercoverage in both the list and area frames.

Questions concerning the Private School Early Estimates System can be directed to:

Marilyn M. McMillen
Elementary/Secondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208

Private School Early Estimates System: 1989–90. This is the second in a series of early estimates for private elementary and secondary education. These early estimates are key statistics reported early in the school year and include the numbers of teachers, students, and high school graduates for private elementary and secondary schools. In subsequent years, the statistical information will be collected from all private schools in the NCES universe, and the early estimates will be based on a subsample of that universe.

Early in October 1989, questionnaires were mailed to a national probability sample of 1,169 private elementary and secondary schools from a universe of approximately 27,000 private schools. Telephone followup of nonrespondents was initiated in late October, and data collection was completed in late November. The overall response rate was 95 percent: 986 of the 1,042 eligible schools. Some 127 of the original 1,167 schools in the sample were determined to be out of scope. While this survey was not designed specifically to yield an estimate

of the number of private schools, the number of out-of-scope schools identified in this survey resulted in a weighted estimate of approximately 26,645 private schools.

The sampling frame used for the survey was composed of two nonoverlapping frames: the NCES list frame of approximately 24,000 eligible schools, and an area frame developed by the Census Bureau for 75 Primary Sampling Units (PSUs). The area frame yielded a sample size of 523 schools for the Schools and Staffing Survey (SASS). The private school early estimates area sample was drawn from the SASS area sample. The sample from the area frame was sorted by level of school, by religious orientation class within school level, then by PSU within religious orientation class, and finally by student membership within PSU.

The sample from the list frame was stratified by level of school (elementary, secondary, combined, and other) and religious orientation (Catholic, other religious, and nonsectarian), and within strata, schools were further sorted by Census regions, and by student membership size within region. Each school in the sorted frame was assigned a sampling measure of size equal to the square root of student membership. The sample design for the list frame was similar, differing in two ways from the design for the area frame. First, stratification by level of school yielded four, rather than three categories: elementary, secondary, combined, and other. Second, the measure of size was simply the square root of student membership.

The survey data were weighted to reflect the sampling rates (probability of selection) and were adjusted for nonresponse. Estimates of standard errors were computed using a variance estimation procedure for complex sample survey data known as balanced repeated replication. The standard errors for private school early estimates for school years 1988–89 and 1989–90 are shown in the table below.

Students (1989–90)	Teachers (1989–90)	Graduates (1988–89)
117,830.9	8,636.1	13,305.6

Nonsampling errors may include such things as differences in the respondents' interpretations of the meaning to the questions, differences related to the particular time the survey was conducted, or errors in data preparation. The survey instrument used in the 1989–90 Early Estimates data collection was developed based on the experiences of the 1988–89 Early Estimates data collection. The form was modified as needed to accommodate one data collection instrument for both the Early Estimates and Universe components of the Private School data collection system. The content of the survey was developed in consultation with representatives of private school associations attending NCES private school data users meetings. The questionnaire and instructions were extensively reviewed by NCES staff. Manual and machine editing of the questionnaires was conducted to check the data for accuracy and consistency. Data were keyed with 100-percent verification.

Undercoverage in the list and area frames is another possible source of nonsampling error. The area frame was used to complement the list frame through the identification of schools missing from the list frame. As the Early Estimates System and the Private School Universe data collection system develop, both the list and area frames will be updated periodically. For the 1989–90 Early Estimates data collection, 1,000 private schools were added to the universe list.

Questions concerning the Private School Early Estimates System can be directed to:

Marilyn M. McMillen
Elementary/Secondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208

Private School Early Estimates System: 1990–91. Early in September 1990, questionnaires were mailed to a national probability sample of 1,167 private elementary and secondary schools. Telephone collection of the data began in early October and was completed in mid-October. The overall response rate was 98 percent: 1,098 of the 1,119 eligible schools. Some 48 of the original 1,167 schools in the sample were determined to be out of scope. After adjusting for out-of-scope schools, the weighted estimate of private schools is 24,553.

The sampling frame used for the survey was composed of two nonoverlapping frames: the NCES Private School Survey list of approximately 20,584 eligible schools (the universe list), and an area frame developed by the Census Bureau, consisting of 923 schools identified in 123 sampled geographic areas (Primary Sampling Units or PSUs). The list frame was stratified by level of school (elementary, secondary, combined, other, and unknown) and religious orientation (Catholic, other religious, and nonsectarian); within strata, schools were further sorted by Census region and by student membership size within region. Each school in the sorted frame was assigned a sampling measure of size equal to the square root of student membership.

The area frame is constructed from a sample survey designed to capture those schools not included in the universe list. The 923 schools identified in the sampled areas are weighted to a national estimate of the number of private schools not included in the universe list. This weighted number is then added to the universe count to produce an estimate of the total number of private schools in the United States. For the early estimate, the area frame was stratified by level of school (elementary, secondary, and other) and religious orientation (Catholic, other religious, and nonsectarian). Within strata, schools were further sorted by FIPS (Federal Information Processing Standards) state code, by FIPS county code within states, and by student membership within counties. Samples were selected with probabilities proportionate to size from each stratum. The measure of size used for this purpose was the square root of student membership multiplied by the inverse of the probability of selection of the PSU in which the school is located.

A new estimation procedure was used to produce the 1990 private school early estimates. This procedure used

the estimates obtained from the entire universe of private schools in the Private School Survey of 1989 and adjusted these estimates for the change reflected in the 1990 early estimates data collections. The steps of this procedure were: (1) obtain Private School Survey (PSS) universe estimates for the data elements desired; (2) adjust PSS estimates for partial and total nonresponse; (3) collect 1990 early estimates data for the data elements; (4) weight the early estimate sample to reflect the sampling rates (probability of selection) and to adjust for total nonresponse separately by the sampling strata and by enrollment; (5) measure the change for these data elements between the PSS and the early estimates data collection for those schools that were in the early estimates sample and had the appropriate data for both 1989 and 1990; and (6) apply the change calculated in step 5 to the data from all of the schools in the PSS universe. Numbers in the tables and text have been rounded. Ratios have been calculated on the actual estimates rather than the rounded values. The 1990 early estimates were adjusted to account for both total and partial nonresponses.

Sample survey data, such as the private school estimates data, are subject to error due to variations in sampling. The standard error is a measure of the variability due to sampling when estimating a statistic. Estimates of standard errors were computed using a variance estimation procedure for complex sample survey data known as balanced repeated replication. The standard errors for private school early estimates for school years 1989–90 and 1990–91 are shown in the table below.

Students (1990–91)	Teachers (1990–91)	Graduates (1989–90)
96,270.9	7,341.5	15,850.2

Survey estimates are also subject to errors of reporting and errors made in the collection and processing of the data. These errors, called nonsampling errors, can sometimes bias the data. Nonsampling errors may include such things as differences in the respondents' interpretations of the meaning to the questions, differences related to the particular time the survey was conducted, or errors in data preparation. The survey instrument used in the 1990–91 private school early estimates data collection was revised as a result of the experiences of the 1989–90 private school early estimates data collection. The content of the survey was developed in consultation with representatives of private school associations attending NCES meetings for users of private school data. The questionnaire and instructions were reviewed extensively by NCES staff. Manual and machine editing of the questionnaires was conducted to check the data for accuracy and consistency. Data were keyed with 100-percent verification.

Undercoverage in the list and area frames is another possible source of nonsampling error. The area frame was used to complement the list frame through the identification of schools missing from the list frame. As the Private School Early Estimates System and the Private School Survey (the universe data collection) system develop, both the list and area frames will be updated periodically.

Questions concerning the Private School Early Estimates System can be directed to:

Sharon A. Bobbitt
Elementary/Secondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208

Private School Early Estimates System: 1991–92. Early in September 1991, questionnaires were mailed to a national probability sample of 1,163 private elementary and secondary schools. Telephone collection of the data began in early October and was completed in mid-October. The overall response rate was 96.5 percent: 1,064 of the 1,103 eligible schools. Some 60 of the original 1,163 schools in the sample were determined to be out of scope. After adjusting for out-of-scope schools, the weighted estimate of private schools is 24,284.

The sampling frame used for the Private School Early Estimates Survey was the 1989–1990 NCES Private School Survey (PSS). This survey collected information on the number of teachers and students in private schools, by school religious orientation and level as well as actual and projected counts of high school graduates. The PSS, and therefore the early estimates survey, uses two nonoverlapping frames: the list frame of approximately 21,515 eligible schools (the universe list), and an area frame developed by the Census Bureau, consisting of 933 schools identified in 124 sampled geographic areas (Primary Sampling Units or PSUs). The area frame is constructed from a sample survey designed to capture those schools not included in the universe list and is repeated every 2 years. The 933 schools identified in the sampled areas are weighted to a national estimate of the number of private schools not included in the universe list. This weighted number is then added to the universe count to produce an estimate of the total number of private schools in the United States.

For the early estimates, the list frame was stratified by level of school (elementary, secondary, combined, other, and unknown) and religious orientation (Catholic, other religious, and nonsectarian); within strata, schools were further sorted by Census region and by student membership size within region. Each school in the sorted frame was assigned a sampling measure of size equal to the square root of student membership.

The area frame was stratified by level of school (elementary, secondary, and other) and religious orientation (Catholic, other religious, and nonsectarian). Within strata, schools were further sorted by FIPS (Federal Information Processing Standards) state code, by FIPS county code within states, and by student membership within counties. Samples were selected with probabilities proportionate to size from each stratum. The measure of size used for this purpose was the square root of student membership multiplied by the inverse of the probability of selection of the PSU in which the school is located.

The list and area samples for the 1991 early estimates were the same as the 1990 early estimate samples.

The estimation procedure used the estimates obtained from the NCES frame of private schools (1989 Private School Survey) and adjusted those estimates for the change reflected in the 1991 early estimates data collections. The steps of this procedure were: 1) obtain Private School Survey (PSS) frame estimates for the data elements desired, adjusting for both partial and total nonresponse; 2) collect 1991 early estimates data for the data elements; 3) weight the early estimate sample to reflect the sampling rates (probability of selection), adjusting for total nonresponse separately by the sampling strata and by enrollment; 4) for each of the data elements, compute the weighted ratio of the 1991 early estimates data and the 1989 PSS data for those schools that reported for both time periods (the change from 1989 to 1991); and 5) multiply the change calculated in step 4 by the appropriate PSS estimate in step 1. Numbers in the tables and text have been rounded. Ratios have been calculated on the actual estimates rather than the rounded values. The 1990 early estimates were adjusted to account for both total and partial nonresponse.

Sample survey data, such as the private school estimates data, are subject to error due to variations in sampling. The standard error is a measure of the variability due to sampling when estimating a statistic. Estimates of standard errors were computed using a variance estimation procedure for complex sample survey data known as balanced repeated replication. The standard errors for private school early estimates for school years 1990–91 and 1991–92 are shown in the table below.

Students (1991–92)	Teachers (1991–92)	Graduates (1990–91)
80,031.0	8,320.1	13,062.3

Estimates of standard errors were computed using a variance estimation procedure for complex sample survey data known as balanced repeated replication (BRR)—a technique that splits the sample into several different half-samples. Weight adjusted estimates are computed from the half-samples. Finally, the standard error of the half-sample estimates is used as an approximation for the full-sample standard error.

Survey estimates are also subject to errors of reporting and errors made in the collection and processing of the data. These errors, called nonsampling errors, can sometimes bias the data. While general sampling theory can be used to estimate the sampling variability of an estimate, nonsampling errors are not easy to measure and usually require either an experiment to be conducted as part of the data collection procedure or use of data external to the study.

Nonsampling errors may include such things as differences in the respondents' interpretation of the meaning of the questions, differences related to the particular time the survey was conducted, or errors in data preparation. The content of the survey was developed in consultation with representatives of private school associations attending NCES meetings for users of private school data. The questionnaire and instructions were reviewed extensively by NCES staff. Manual and machine editing of the questionnaires was conducted to check the data for accuracy and consistency. Data were keyed with 100-percent verification.

Undercoverage in the list and area frames is another possible source of nonsampling error. The area frame was used to complement the list frame through the identification of schools missing from the list frame. The area frame represents approximately 20 percent of the total number of private schools. The estimates in this report do not take into account newly opened private schools. As a result, the estimates of students, teachers, and graduates may be biased and lower than the actual numbers. The 1991–92 list and area frame updates to the PSS will be reflected in next year's early estimates, and so new schools will be included in those new estimates. As the Private School Early Estimates System and the Private School Survey (the universe data collection) system develop, both the list and area frames will be updated periodically.

Questions concerning the Private School Early Estimates System can be directed to:

Sharon A. Bobbitt
Elementary/Secondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208

Private School Early Estimates System: 1992–93. Early in September 1992, advance questionnaires were mailed to a national probability sample of 1,167 private elementary and secondary schools. Telephone collection of the data began in early October and was completed in mid-October. The telephone data collection used Computer Assisted Telephone Interviewing (CATI) technology to collect the data and perform preliminary edits. The overall response rate was 93.31 percent: 1,045 of the 1,120 eligible schools. Some 47 of the original 1,167 schools in the sample were determined to be out-of-scope. After adjusting for out-of-scope schools, the weighted estimate of private schools is 26,011.

The sampling frame used for the Private School Early Estimates Survey was the 1991–92 NCES Private School Survey (PSS). This survey collected information on the number of teachers and students in private schools, by school religious orientation and level as well as actual and projected counts of high school graduates. The PSS, and therefore the early estimates survey, uses two nonoverlapping frames: the list frame of approximately 24,000 eligible schools (the universe list), and an area frame developed by the Census Bureau, consisting of 355 schools identified in 124 sampled geographic areas (Primary Sampling Units or PSUs). The area frame is constructed from a sample survey designed to capture those schools not included in the universe list and is repeated every 2 years. The 355 schools identified in the sampled areas are weighted to a national estimate of the number of private schools not included in the universe list. This weighted number is then added to the universe count to

produce an estimate of the total number of private schools in the United States.

For the early estimates, the list frame was stratified by level of school (elementary, secondary, and combined) and religious orientation (Catholic, other religious, and nonsectarian). Within strata, schools were further sorted by Census region (Northeast, Midwest, South, and West), by urbanicity (urban, suburban, and rural) within region, and by student membership size within urbanicity. Each school in the sorted frame was assigned a sampling measure of size equal to the square root of student membership.

The area frame was stratified by level of school (elementary, secondary, and combined) and religious orientation (Catholic, other religious, and nonsectarian). Within strata, schools were further sorted by FIPS (Federal Information Processing Standards) state code, by PSU within state, and by student membership within PSU. Samples were selected with probabilities proportionate to size from each stratum. The measure of size used for this purpose was the square root of student membership multiplied by the inverse of the probability of selection of the PSU in which the school is located.

The estimation procedure is a two-step process. The first step is to produce estimates based on the NCES frame for private schools (1991–92 Private School Survey). These estimates are adjusted for total school nonresponse, as well as item nonresponse. The second step is to update the PSS based estimates, using the data collected in the 1992 Early Estimates Survey (EES). This EES update is a ratio estimate of the 1992 estimate from EES divided by the 1991 estimate based on the 1991 PSS data for the EES sample. The estimates in the tables are the PSS based estimates time the EES update. The early estimates in this report incorporate the relevant estimates from the PSS and update then using data collected in the EES.

The private school early estimates are based on a sample; these estimates may differ somewhat from figures that would have been obtained if a complete census of private schools had been taken using the same questionnaire and procedures. The standard error indicates the magnitude of the sampling error, the variability due to sampling when estimating a statistic. It indicates how much variance there is in the population of possible estimates of a parameter for a given sample size. Standard errors can be used as a measure of the precision expected from a particular sample. If all possible samples were surveyed under similar conditions, intervals of 1.96 standard errors below to 1.96 standard errors above a particular statistic would include the true population parameter being estimated in about 95 percent of the samples. This is a 95 percent confidence interval. For example, for the ratio of private school pupils to private school teachers in 1992–93, the estimate for all private schools is 14.9 and the standard error is 0.2. The 95 percent confidence interval for this statistic extends from 14.9 - (0.2 times 1.96) to 14.9 + (0.2 times 1.96) or from 14.5 to 15.3. The standard error for the 4,964,258 students in private schools is 116,612. The 95 percent confidence interval for this statistic extends from 4,735,698 to 5,192,818.

Estimates of standard errors were computed using a variance estimation procedure for complex sample survey data known as balanced repeated replication (BRR)—a technique that splits the sample into several different half-samples. Weight adjusted estimates are computed from the half-samples. Finally, the standard error of the half-sample estimates is used as an approximation for the full-sample standard error. The standard errors for private school early estimates for school years 1991–92 and 1992–93 are shown in the table below.

Students (1992–93)	Teachers (1992–93)	Graduates (1991–92)
116,612.2	8,714.8	6,071.4

Survey estimates are also subject to errors of reporting and errors made in the collection and processing of the data. These errors, called nonsampling errors, can sometimes bias the data. While general sampling theory can be used to estimate the sampling variability of an estimate, nonsampling errors are not easy to measure and usually require either an experiment conducted as part of the data collection procedure or use of data external to the study.

Nonsampling errors may include such things as differences in the respondents' interpretation of the meaning of the questions, differences related to the particular time the survey was conducted, or errors in data preparation. The content of the survey was developed in consultation with representatives of private school associations attending NCES meetings for users of private school data. The questionnaire and instructions were reviewed extensively by NCES staff. The CATI instrument provided on-line internal consistency checks (i.e., totals equal sum of parts) as well as consistency checks with 1991 data for the sample school. Interviewers resolved discrepancies with the school during the course of the interview. Machine editing of the questionnaires was conducted to check the data for accuracy and consistency. Data inputs into the CATI system were transferred directly to processing, avoiding potential keying errors.

Undercoverage in the list and area frames is another possible source of nonsampling error. The area frame was used to complement the list frame through the identification of schools missing from the list frame. The area frame represents approximately 10 percent of the total number of private schools. The 1991–92 list and area frame updates to the PSS were reflected in this year's early estimates, and so schools newly opened since 1989 are included in those new estimates.

Questions concerning the Private School Early Estimates System can be directed to:

Sharon A. Bobbitt
Frank H. Johnson
Mary A. Rochon
Elementary/Secondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208

Integrated Postsecondary Education Data System

The Integrated Postsecondary Education Data System (IPEDS) surveys all postsecondary institutions, including universities and colleges, as well as institutions offering technical and vocational education beyond the high school level. This survey, which began in 1986, replaces and supplements the Higher Education General Information Survey (HEGIS).

The IPEDS consists of several integrated components that obtain information on who provides postsecondary education (institutions), who participates in it and completes it (students), what programs are offered and what programs are completed, and both the human and financial resources involved in the provision of institutionally based postsecondary education. Specifically, these components include: "Institutional Characteristics," including institutional activity; fall enrollment, including age and residence; fall enrollment in occupationally specific programs; completions; finance; staff; salaries of full-time instructional faculty; and academic libraries.

The higher education portion of this survey is a census of accredited 2- and 4-year colleges. Prior to 1993, data from the technical and vocational institutions are collected through a sample survey. Beginning in 1993, all data are gathered in a census of all postsecondary institutions. Thus, some portions of the data will be subject to sampling and nonsampling errors, while some portions will be subject only to nonsampling errors.

Prior to the establishment of IPEDS in 1986, HEGIS acquired and maintained statistical data on the characteristics and operations of institutions of higher education. Implemented in 1966, HEGIS was an annual universe survey of institutions listed in the latest NCES' *Education Directory, Colleges and Universities*.

The information presented in this report draws on IPEDS surveys that solicited information concerning institutional characteristics, enrollment, degrees, and finances. The higher education portion of this system is a census of accredited 2- and 4-year colleges. Since these surveys cover all institutions in the universe, the data are not subject to sampling error.

However, they are subject to nonsampling error, the sources of which vary with the survey instrument. Each survey will therefore be discussed separately. Information concerning the nonsampling error of the enrollment and degrees surveys is drawn extensively from the HEGIS Post-Survey Validation Study conducted in 1979.

Institutional Characteristics. This survey provided the basis for the universe of institutions presented in the *Education Directory, Colleges and Universities*. The universe comprised institutions that met certain accreditation criteria and offered at least a 1-year program of college-level studies leading toward a degree. All of these institutions were certified as eligible by the U.S. Department of Education's Division of Eligibility and Agency Evaluation. Each fall, institutions listed in the previous year's *Directory* were asked to update a computer printout of their information.

Fall Enrollment. This survey has been part of the IPEDS or HEGIS series since 1966. The enrollment survey response rate was relatively high; the 1993 response rate was 97.0 percent. Major sources of nonsampling error for this survey were classification problems, the unavailability of needed data, interpretation of definitions, the survey due date, and operational errors. Of these, the classification of students appears to have been the main source of error. Institutions had problems in correctly classifying first-time freshmen, other first-time students, and unclassified students for both full-time and part-time categories. These problems occurred most often at 2-year institutions (private and public) and private 4-year institutions. In the 1977–78 HEGIS validation studies, the classification problem led to an estimated overcount of 11,000 full-time students and an undercount of 19,000 part-time students. Although the ratio of error to the grand total was quite small (less than 1 percent), the percentage of errors was as high as 5 percent for detailed student levels and even higher at certain aggregation levels.

Beginning with fall 1986, the survey system was redesigned with the introduction of the Integrated Postsecondary Education (IPEDS) (see above). The new survey system comprises all postsecondary institutions, but also maintains comparability with earlier surveys by allowing HEGIS institutions to be tabulated separately. The new system also provides for preliminary and revised data releases. This allows the Center flexibility to release early data sets while still maintaining a more accurate final data base.

Completions. This survey was part of the HEGIS series throughout its existence. However, the degree classification taxonomy was revised in 1970–71, 1982–83, and 1991–92. Collection of degree data has been maintained through the IPEDS system.

Though information from survey years 1970–71 through 1981–82 is directly comparable, care must be taken if information before or after that period is included in any comparison. Degrees-conferred trend tables arranged by the 1991–92 classification were added to *Projections of Education Statistics* to provide consistent data from 1970–71 to 1991–92. Data in this edition on associate degrees cannot be made comparable with figures prior to 1982–83. The nonresponse rate did not appear to be a significant source of nonsampling error for this survey. The return rate over the years was high, with the response rate for the 1991–92 survey at 94.1 percent. Because of the high return rate, nonsampling error caused by imputation was also minimal.

The major sources of nonsampling error for this survey were differences between the NCES program taxonomy and taxonomies used by the colleges, classification of double majors and double degrees, operational problems, and survey timing. In the 1979 HEGIS validation study, these sources of nonsampling were found to contribute to an error rate of 0.3 percent overreporting of bachelor's degrees and 1.3 percent overreporting of master's degrees. The differences, however, varied greatly among fields. Over 50 percent of the fields selected for the validation study

had no errors identified. Categories of fields that had large differences were business and management, education, engineering, letters, and psychology. It was also shown that differences in proportion to the published figures were less than 1 percent for most of the selected fields that had some errors. Exceptions to these were: master's and Ph.D. programs in labor and industrial relations (20 percent and 8 percent); bachelor's and master's programs in art education (3 percent and 4 percent); bachelor's and Ph.D. programs in business and commerce, and in distributive education (5 percent and 9 percent); master's programs in philosophy (8 percent); and Ph.D. programs in psychology (11 percent).

Financial Statistics. This survey was part of the HEGIS series and has been continued under the IPEDS system. Changes were made in the financial survey instruments in fiscal years (FY) 1976, 1982, and 1987. The FY 76 survey instrument contained numerous revisions to earlier survey forms and made direct comparisons of line items very difficult. Beginning in FY 82, Pell Grant data were collected in Federal restricted grants and contracts revenues and restricted scholarships and fellowships expenditures. The introduction of the Integrated Postsecondary Education Data System (IPEDS) in the FY 87 survey included several important changes to the survey instrument and data processing procedures. While these changes were significant, considerable effort has been made to present only comparable information on trends in this report and to note inconsistencies. Finance tables for this publication have been adjusted by subtracting the largely duplicative Pell Grant amounts from the later data to maintain comparability with pre-FY 82 data.

Possible sources of nonsampling error in the financial statistics include nonresponse, imputation, and misclassification. The response rate has been about 85 to 90 percent for most of the years reported. The response rate for the FY 1991 survey was 86.7 percent.

Two general methods of imputation were used in HEGIS. If the prior years' data were available for a nonresponding institution, these data were inflated using the Higher Education Price Index and adjusted according to changes in enrollments. If there were no data for the previous four years, current data were used from Peer institutions selected for location (state or region), control, level, and enrollment size of institution. In most cases, estimates for nonreporting institutions in IPEDS were made using data from peer institutions.

Beginning with FY 87, the new system (IPEDS) comprises all postsecondary institutions, but also maintains comparability with earlier surveys by allowing 2- and 4-year HEGIS institutions to be tabulated separately. The finance data tabulated for this publication reflect totals for the HEGIS or higher education institutions only.

To reduce reporting error, NCES used national standards for reporting finance statistics. These standards are contained in *College and University Business Administration: Administrative Services (1974 Edition)* and the *Financial Accounting and Reporting Manual for Higher Education (1990 Edition)* published by the National Association of College and University Business Officers; *Audits of Colleges and Universities* (as amended August 31, 1974), by the American Institute of Certified Public Accountants; and *HEGIS Financial Reporting Guide (1980)*, by NCES. Wherever possible, definitions and formats in the survey are consistent with those in these four accounting texts.

Questions concerning the surveys used as data sources for this report or other questions concerning HEGIS can be directed to:

Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208

Bureau of the Census

Current Population Survey

Current estimates of school enrollment, as well as social and economic characteristics of students, are based on data collected in the Census Bureau's monthly survey of about 60,000 households. The monthly Current Population Survey (CPS) sample consists of 729 areas comprising 1,973 counties, independent cities, and minor civil divisions throughout the 50 states and the District of Columbia. The sample was initially selected from the 1980 census files and is periodically updated to reflect new housing construction.

The monthly CPS deals primarily with labor force data for the civilian noninstitutional population (i.e., excluding military personnel and their families living on post and inmates of institutions). In addition, on October of each year, supplemental questions are asked about highest grade completed, level of current enrollment, attendance status, number and types of courses, degree or certificate objective, and type of organization offering instruction for each member of the household.

The estimation procedure used for the monthly CPS data involves inflating weighted sample results to independent estimates of characteristics of the civilian noninstitutional population in the United States by age, sex, and race. These independent estimates are based on statistics from decennial censuses that include statistics on births, deaths, immigration, and emigration and statistics on the population in the armed services. Generalized standard error tables are in the *Current Population Reports*. The data are subject to both nonsampling and sampling errors.

More information is available in the *Current Population Reports*, Series P-20, or by contacting:

Education and Social Stratification Branch
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

School Enrollment. Each October, the Current Population Survey (CPS) includes supplemental questions on

the enrollment status of the population 3 years old and over. The main sources of nonsampling variability in the responses to the supplement are those inherent in the survey instrument. The question concerning educational attainment may be sensitive for some respondents who may not want to acknowledge their lack of a high school diploma. The question of current enrollment may not be answered accurately for various reasons. Some respondents may not know current grade information for every student in the household, a problem especially prevalent for households with members in college or in nursery school. Confusion over college credits or hours taken by a student may make it difficult to determine the year in which the student is enrolled. Problems may occur with the definition of nursery school (a group or class organized to provide educational experiences for children) where respondents' interpretations of "educational experiences" vary.

Questions concerning the CPS "School Enrollment" survey may be directed to:

Education and Social Stratification Branch
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

State population projections. These state population projections were prepared using a cohort-component method by which each component of population change—births, deaths, state-to-state migration flows, international in-migration, and international out-migration—was projected separately for each birth cohort by sex, race, and Hispanic origin. The basic framework was the same as in past Census Bureau projections. However, in the absence of detailed components for some race and Hispanic origin groups, the necessary starting point components were derived by indirect standardization from the starting points used in the national projections.

The cohort-component method is based on the traditional demographic accounting system:

$$P_1 = P_0 + B - D + DIM - DOM + IIM - IOM$$

where:

P_1 = population at the end of the period

P_0 = population at the beginning of the period

B = births during the period

D = deaths during the period

DIM = domestic in-migration during the period

DOM = domestic out-migration during the period

IIM = international in-migration during the period

IOM = international out-migration during the period

To generate population projections with this model, we first created separate data sets for each of these components. In general, the assumptions concerning the future levels of fertility, mortality, and international migration are consistent with the assumptions developed for the national population projections released by the Census Bureau.

Once the data for each component were developed, it was a relatively straightforward process to apply the cohort-component method and produce the projections. For each projection year the base population for each state was disaggregated into the four racial categories (White; Black; American Indian, Eskimo, and Aleut; and Asian and Pacific Islander), by sex, and single year of age (ages 0 to 85+). The next step was to survive each age-sex-race group forward 1 year using the pertinent survival rate. The internal redistribution of the population was accomplished by applying the appropriate state-to-state migration rates to the survived population in each state. The projected out-migrants were subtracted from the state of origin and added to the state of destination (as in-migrants). Next, the appropriate number of immigrants from abroad were added to each group. The populations under age 1 were created by applying the appropriate age-race-specific birth rates to females of childbearing age. The number of births by sex and race were survived forward and exposed to the appropriate migration rate to yield the population under age 1. The final results of the projection process were adjusted to be consistent with the national population projections by single years of age, sex, and race. The entire process was then repeated for each year of the projection. This same process was repeated for the Hispanic Origin population separately.

Questions concerning the state population projections may be directed to:

Population Projections Branch
Bureau of the Census
U.S. Department of Commerce
Washington, D.C. 20233

Other Sources

National Education Association

Estimates of School Statistics

The National Education Association (NEA) reports teacher, revenue, and expenditure data in its annual publication, *Estimates of School Statistics*. Each year, NEA prepares regression-based estimates of financial and other education statistics and submits them to the states for verification. Generally, about 30 states adjust these estimates based on their own data. These preliminary data are published by NEA along with revised data from pre-

vious years. States are asked to revise previously submitted data as final figures become available. The most recent publication contains all changes reported to the NEA.

Further information on the NEA survey can be obtained from:

National Education Association—Research
1201 16th Street NW
Washington, DC 20036

DRI/McGraw-Hill

DRI/McGraw-Hill provides an information system that includes more than 125 databases: simulation and planning models; regular publications and special studies; data retrieval and management systems; and access to experts on economic, financial, industrial, and market activities. One service is the DRI U.S. Annual Model Forecast Data Bank, which contains annual projections of the U.S. economic and financial conditions, including forecasts for the federal government, incomes, population, prices and wages, and state and local government, over a long-term (10 to 25-year) forecast period.

Additional information is available from:

DRI/McGraw-Hill
24 Hartwell Avenue
Lexington, MA 02173

Appendix D

Glossary

Data Terms

Associate degree: A degree granted for the successful completion of a subbaccalaureate program of studies, usually requiring at least 2 years (or the equivalent) of full-time college-level study. This term includes degrees granted in a cooperative or work–study program.

Average daily attendance (ADA): The aggregate attendance of a school during a reporting period (normally a school year) divided by the number of days school is in session during this period. Only days on which the pupils are under the guidance and direction of teachers should be considered days in session.

Average daily membership (ADM): The aggregate membership of a school during a reporting period (normally a school year) divided by the number of days school is in session during this period. Only days on which the pupils are under the guidance and direction of teachers should be considered as days in session. The average daily membership for groups of schools having varying lengths of terms is the average of the average daily memberships obtained for the individual schools.

Bachelor's degree: A degree granted for the successful completion of a baccalaureate program of studies, usually requiring at least 4 years (or the equivalent) of full-time college-level study. This term includes degrees granted in a cooperative or work–study program.

Classroom teacher: A staff member assigned the professional activities of instructing pupils in self-contained classes or courses, or in classroom situations. Usually expressed in full-time equivalents.

Cohort: A group of individuals that have a statistical factor in common, for example, year of birth.

College: A postsecondary school that offers a general or liberal arts education, usually leading to an associate, bachelor's, master's, doctor's, or first-professional degree. Junior colleges and community colleges are included in this term.

Constant dollars: Dollar amounts that have been adjusted by means of price and cost indexes to eliminate inflationary factors and allow direct comparison across years.

Consumer Price Index (CPI): This price index measures the average change in the cost of a fixed market basket of goods and services purchased by consumers.

Current dollars: Dollar amounts that have not been adjusted to compensate for inflation.

Current expenditures (elementary/secondary): The expenditures for operating local public schools, excluding capital outlay and interest on school debt. These expenditures include such items as salaries for school personnel, fixed charges, student transportation, school books and materials, and energy costs.

Current expenditures per pupil in average daily attendance: Current expenditures for the regular school term divided by the average daily attendance of full-time pupils (or full-time-equivalency of pupils) during the term. See also *current expenditures* and *average daily attendance*.

Current-fund expenditures (higher education): Money spent to meet current operating costs, including salaries, wages, utilities, student services, public services, research libraries, scholarships and fellowships, auxiliary enterprises, hospitals, and independent operations. Excludes loans, capital expenditures, and investments.

Current Population Survey: See Appendix C, Data Sources.

Disposable income: Current income received by persons less their contributions for social insurance, personal tax, and nontax payments. It is the income available to persons for spending and saving. Nontax payments include passport fees, fines and penalties, donations, and tuitions and fees paid to schools and hospitals operated mainly by the government. See also *personal income*.

Doctor's degree: An earned degree carrying the title of doctor. The Doctor of Philosophy degree (Ph.D.) is the highest academic degree and requires mastery within a field of knowledge and demonstrated ability to perform scholarly research. Other doctorates are awarded for fulfilling specialized requirements in professional fields, such as education (Ed.D.), musical arts (D.M.A.), business administration (D.B.A.), and engineering (D.Eng. or D.E.S.). Many doctor's degrees in both academic and professional fields require an earned master's degree as a prerequisite. First-professional degrees, such as M.D. and D.D.S., are not included under this heading.

Educational and general expenditures: The sum of current funds expenditures on instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, and awards from restricted and unrestricted funds.

Elementary school: A school classified as elementary by state and local practice and composed of any span of grades not above grade 8. A preschool or kindergarten school is included under this heading only if it is an integral part of an elementary school or a regularly established school system.

Elementary and secondary schools: As used in this publication, includes only regular schools, that is, schools that are part of state and local school systems and also most private elementary and secondary schools, both religiously affiliated and nonsectarian. Schools not included in this term are subcollegiate departments of institutions of higher education, American residential schools for exceptional children, federal schools for Indians, and federal schools on military posts and other federal installations.

Enrollment: The number of students registered in a given school unit at a given time, generally in the fall of a year.

Expenditures: Charges incurred, whether paid or unpaid, that are presumed to benefit the current fiscal year. For elementary and secondary schools, these include all charges for current outlays plus capital outlays and interest on school debt. For institutions of higher education, these include current outlays plus capital outlays. For government, these include charges net of recoveries and other correcting transactions other than for retirement of debt, investment in securities, or extension of credit. Government expenditures include only external transactions, such as the provision of perquisites or other payments in kind. Aggregates for groups of governments exclude intergovernmental transactions.

Expenditures per pupil: Charges incurred for a particular period of time divided by a student unit of measure, such as average daily attendance or average daily membership.

First-professional degree: A degree that signifies both completion of the academic requirements for beginning practice in a given profession and a level of professional skill beyond that normally required for a bachelor's degree. This degree usually is based on a program requiring at least 2 academic years of work before entrance and a total of at least 6 academic years of work to complete the degree program, including both prior required college work and the professional program itself. By NCES definition, first-professional degrees are awarded in the fields of dentistry (D.D.S or D.M.D.), medicine (M.D.), optometry (O.D.), osteopathic medicine (D.O.), pharmacy (D.Phar.), podiatric medicine (D.P.M.), veterinary medicine (D.V.M.), chiropractic (D.C. or D.C.M.), law (LL.B. or J.D.), and theological professions (M.Div. or M.H.L.).

First-professional enrollment: The number of students enrolled in a professional school or program that requires at least 2 years of academic college work for entrance and a total of at least 6 years for a degree. By NCES definition, first-professional enrollment includes only students in certain programs. (See *first-professional degree* for a list of programs.)

Full-time enrollment: The number of students enrolled in higher education courses with total credit load equal to at least 75 percent of the normal full-time course load.

Full-time-equivalent (FTE) enrollment: For institutions of higher education, enrollment of full-time students, plus the full-time equivalent of part-time students as reported by institutions. In the absence of an equivalent reported by an institution, the FTE enrollment is estimated by adding one-third of part-time enrollment to full-time enrollment.

Full-time worker: In educational institutions, an employee whose position requires being on the job on school days throughout the school year at least the number of hours the schools are in session; for higher education, a member of an educational institution's staff who is employed full time.

Graduate: An individual who has received formal recognition for the successful completion of a prescribed program of studies.

Graduate enrollment: The number of students who hold the bachelor's or first-professional degree, or the equivalent, and who are working toward a master's or doctor's degree. First-professional students are counted separately. These enrollment data measure those students who are registered at a particular time during the fall. At some institutions, graduate enrollment also includes students who are in postbaccalaureate classes but not in degree programs.

High school: A secondary school offering the final years of high school work necessary for graduation, usually including grades 10, 11, and 12 (in a 6-3-3 plan), or grades 9, 10, 11, and 12 (in a 6-2-4 plan).

Higher education: Study beyond secondary school at an institution that offers programs terminating in an associate, baccalaureate, or higher degree.

Higher education institutions (traditional classifications):

4-year institution: An institution legally authorized to offer and offering at least a 4-year program of college-level studies wholly or principally creditable toward a bachelor's degree. A university is a postsecondary institution that typically includes one or more graduate professional schools.

2-year institution: An institution legally authorized to offer and offering at least a 2-year program of college-level studies that terminates in an associate degree or is principally creditable toward a baccalaureate.

Higher Education Price Index: A price index which measures average changes in the prices of goods and services purchased by colleges and universities through current-fund education and general expenditures (excluding expenditures for sponsored research and auxiliary enterprises).

Instructional staff: Full-time-equivalent number of positions, not the number of individuals occupying the positions during the school year. In local schools, it includes all public elementary and secondary (junior and senior high) day-school positions that are in the nature of teaching or the improvement of the teaching–learning situation. Includes consultants or supervisors of instruction, principals, teachers, guidance personnel, librarians, psychological personnel, and other instructional staff. Excludes administrative staff, attendance personnel, clerical personnel, and junior college staff.

Master's degree: A degree awarded for successful completion of a program generally requiring 1 or 2 years of full-time college-level study beyond the bachelor's degree. One type of master's degree, including the Master of Arts degree (M.A.) and the Master of Science degree (M.S.) is awarded in the liberal arts and sciences for advanced scholarship in a subject field or discipline and demonstrated ability to perform scholarly research. A second type of master's degree is awarded for the completion of a professionally oriented program, for example, an M.Ed. in education, an M.B.A. in business administration, an M.F.A. in fine arts, an M.M. in music, an M.S.W. in social work, or an M.P.A. in public administration. A third type of master's degree is awarded in professional fields for study beyond the first-professional degree, for example, the Master of Laws (LL.M.) and Master of Science in various medical specializations.

Part-time enrollment: The number of students enrolled in higher education courses with a total credit load of less than 75 percent of the normal full-time credit load.

Personal income: Current income received by persons from all sources minus their personal contributions for social insurance. Classified as "persons" are individuals (including owners of unincorporated firms), nonprofit institutions serving individuals, private trust funds, and private noninsured welfare funds. Personal income includes transfers (payments not resulting from current production) from government and business such as social security benefits, military pensions, and so forth, but excludes transfers among persons.

Postbaccalaureate enrollment: The number of graduate and first-professional students working toward advanced degrees and students enrolled in graduate-level classes but not enrolled in degree programs. See also *graduate enrollment* and *first-professional enrollment*.

Private institution: A school or institution that is controlled by an individual or agency other than a state, a subdivision of a state, or the federal government; that is usually supported primarily by other than public funds; and the operation of whose program rests with other than publicly elected or appointed officials.

Property tax: The sum of money collected from a tax levied against the value of property.

Public school or institution: A school or institution controlled and operated by publicly elected or appointed officials and deriving its primary support from public funds.

Pupil–teacher ratio: The enrollment of pupils at a given period of time, divided by the full-time-equivalent number of classroom teachers serving these pupils during the same period.

Revenues: All funds received from external sources, net of refunds and correcting transactions. Noncash transactions such as receipt of services, commodities, or other receipts "in kind" are excluded, as are funds received from the issuance of debt, liquidation of investments, or nonroutine sale of property.

Revenues receipts: Additions to assets that do not incur an obligation that must be met at some future date and do not represent exchanges of property for money. Assets must be available for expenditures.

Salary: The total amount regularly paid or stipulated to be paid to an individual, before deductions, for personal services rendered while on the payroll of a business or organization.

School: A division of the school system consisting of students in one or more grades or other identifiable groups and organized to give instruction of a defined type. One school may share a building with another school or one school may be housed in several buildings.

Secondary instructional level: The general level of instruction provided for pupils in secondary schools (generally covering grades 7 through 12 or 9 through 12)

and any instruction of a comparable nature and difficulty provided for adults and youth beyond the age of compulsory school attendance.

Secondary school: A school including any span of grades beginning with the next grade following an elementary or middle school (usually 7, 8, or 9) and ending with or below grade 12. Both junior high schools and senior high schools are included.

Senior high school: A secondary school offering the final years of high school work necessary for graduation.

Student: An individual for whom instruction is provided in an educational program under the jurisdiction of a school, school system, or other educational institution. No distinction is made between the terms "student" and "pupil," although "student" may refer to one receiving instruction at any level while "pupil" refers only to one attending school at the elementary or secondary level. The term "student" is used to include individuals at all instructional levels. A student may receive instruction in a school facility or in another location, such as at home or in a hospital. Instruction may be provided by direct student-teacher interaction or by some other approved medium, such as television, radio, telephone, or correspondence.

Tax base: The collective value of objects, assets, and income components against which a tax is levied.

Total expenditure per pupil in average daily attendance: Includes all expenditures allocable to per pupil costs divided by average daily attendance. These allocable expenditures include current expenditures for regular school programs, interest on school debt, and capital outlay. Beginning in 1980-81, expenditures for administration by state governments are excluded and expenditures for other programs (summer schools, community colleges, and private schools) are included.

Unclassified students: Students who are not candidates for a degree or other formal award, although they are taking higher education courses for credit in regular classes with other students.

Undergraduate students: Students registered at an institution of higher education who are working in a program leading to a baccalaureate or other formal award below the baccalaureate, such as an associate degree.

Statistical Terms

Auto-Correlation: Correlation of the error terms from different observations of the same variable. Also called *serial correlation.*

Degrees of freedom: The number of free or linearly independent sample observations used in the calculation of a statistic.

Dependent variable: A mathematical variable whose value is determined by that of one or more other variables in a function. In regression analysis, when a random variable, y, is expressed as a function of variables x_1, x_2,..., plus a stochastic term, the y is known as the "dependent variable."

Double exponential smoothing: A method that takes a single smoothed average component of demand and smoothes it a second time to allow for estimation of a trend effect.

Durbin-Watson statistic: A statistic testing the independence of errors in least squares regression against the alternative of first-order serial correlation. The statistic is a simple linear transformation of the first-order serial correlation of residuals and, although its distribution is unknown, it is tested by bounding statistics that follow R. L. Anderson's distribution.

Econometrics: The quantitative examination of economic trends and relationships using statistical techniques, and the development, examination, and refinement of those techniques.

Estimate: A numerical value obtained from a statistical sample and assigned to a population parameter. The particular value yielded by an estimator in a given set of circumstances or the rule by which such particular values are calculated.

Estimating equation: An equation involving observed quantities and an unknown that serves to estimate the latter.

Estimation: Estimation is concerned with inference about the numerical value of unknown population values from incomplete data, such as a sample. If a single figure is calculated for each unknown parameter, the process is called point estimation. If an interval is calculated within which the parameter is likely, in some sense, to lie, the process is called interval estimation.

Exogenous variable: Variables for which the values are determined outside the model but which influence the model.

Exponential smoothing: A method used in time series to smooth or to predict a series. There are various forms, but all are based on the supposition that more remote history has less importance than more recent history.

Ex-Ante forecast: When forecasting a dependent variable for some time period t using a model with at least one independent variable, the forecast of the dependent variable is an ex-ante forecast if the values for the independent variables for time period t are themselves not known.

Ex-Post forecast: When forecasting a dependent variable for some time period t using a model with at least one independent variable, the forecast of the dependent variable is an ex-post forecast if the values for the independent variables for time period t are the actual values. Ex-post forecasts are often used in forecast evaluation.

First-Order serial correlation: When errors in one time period are correlated directly with errors in the ensuing time period. Also called *auto-correlation.*

Forecast: An estimate of the future based on rational study and analysis of available pertinent data, as opposed to subjective prediction.

Forecasting: Assessing the magnitude which a quantity will assume at some future point in time: as distinct from "estimation," which attempts to assess the magnitude of an already existent quantity.

Forecast horizon: The number of time periods into the future which are forecasted. Forecasts for next year are said to have a 1-year forecast horizon.

Function: A mathematical correspondence that assigns exactly one element of one set to each element of the same or another set. A variable that depends on and varies with another.

Functional form: A mathematical statement of the relationship among the variables in a model.

Independent variable: In regression analysis, when a random variable, y, is expressed as a function of variables x_1, x_2,..., plus a stochastic term, the x's are known as "independent variables."

Lag: An event occurring at time $t + k$ $(k > 0)$ is said to lag behind an event occurring at time t, the extent of the lag being k. An event occurring k time periods before another may be regarded as having a negative lag.

Maximum likelihood estimation: A method of estimating a parameter or parameters of a population by that value (or values) that maximizes (or maximize) the likelihood of a sample.

Mean absolute percentage error (MAPE): The average value of the absolute value of errors expressed in percentage terms.

Model: A system of postulates, data, and inferences presented as a mathematical description of a phenomenon such as an actual system or process. The actual phenomenon is represented by the model in order to explain it, to predict it, and to control it.

Ordinary least squares (OLS): The estimator that minimizes the sum of squared residuals.

Parameter: A quantity that describes a statistical population.

Projection: In relation to a time series, an estimate of future values based on a current trend.

R^2: The coefficient of determination; the square of the correlation coefficient between the dependent variable and its OLS estimate.

$\bar{R}^2$(also called the adjusted R^2): The coefficient of determination adjusted for the degrees of freedom.

Regression analysis: A statistical technique for investigating and modeling the relationship between variables.

Rho: A measure of the correlation coefficient between errors in time period t and time period t minus 1.

Serial correlation: Correlation of the error terms from different observations. Also called *auto-correlation*.

Standard error of estimate: An expression for the standard deviation of the observed values about a regression line. An estimate of the variation likely to be encountered in making predictions from the regression equation.

Time series: A set of ordered observations on a quantitative characteristic of an individual or collective phenomenon taken at different points in time. Usually the observations are successive and equally spaced in time.

Time series analysis: The branch of quantitative forecasting in which data for one variable are examined for patterns of trend, seasonality, and cycle.

Variable: A quantity that may assume any one of a set of values.

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ERRATA

Several errors were found in Tables 45, 46, 47 and 48, of the *Projections of Education Statistics to 2006*. The enrollment figure for 1993 was incorrectly reported in Table 45 as 40,044,000. The correct enrollment figure is 43,476,000.

This errata sheet also corrects the projection figures for the states of Delaware and Idaho for the years 1995 though 2006. The discrepancy was a result of a data entry error on migration rates into and out of these states. Because a wrong migration factor was entered into the state projections model, future enrollment projections for Delaware and Idaho were inaccurate.

Attached are the corrected tables for inclusion in your copy of the *Projections* publication. We regret any inconvenience this may have caused.

October 1996

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Table 45.—Enrollment in grades K–12 in public elementary and secondary schools, by region and state, with projections: Fall 1988 to fall 2006

(In thousands)

Region and state	Actual						Projected			
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
United States	40,189	40,543	41,217	42,047	42,816	43,476	44,230	45,076	45,885	46,524
Northeast	7,208	7,200	7,282	7,407	7,526	7,654	7,799	7,930	8,055	8,153
Connecticut	461	462	469	481	488	496	511	519	527	532
Maine	213	214	215	216	216	217	219	219	219	218
Massachusetts	823	826	834	846	860	878	899	915	930	943
New Hampshire	169	172	173	177	181	185	191	194	196	198
New Jersey	1,081	1,076	1,090	1,110	1,131	1,151	1,173	1,199	1,229	1,255
New York	2,574	2,566	2,598	2,644	2,690	2,734	2,771	2,817	2,862	2,896
Pennsylvania	1,660	1,655	1,668	1,693	1,718	1,744	1,781	1,809	1,832	1,849
Rhode Island	134	136	139	142	144	146	150	152	154	156
Vermont	93	95	96	97	99	103	104	105	106	106
Midwest	9,846	9,849	9,944	10,080	10,198	10,298	10,425	10,562	10,666	10,742
Illinois	1,795	1,797	1,821	1,848	1,874	1,893	1,907	1,937	1,966	1,989
Indiana	961	954	955	957	961	966	970	980	990	999
Iowa	478	478	484	491	495	499	500	505	507	508
Kansas	427	431	437	445	452	458	470	477	481	484
Michigan	1,583	1,577	1,584	1,594	1,604	1,599	1,632	1,657	1,674	1,686
Minnesota	727	740	756	774	794	810	828	841	849	854
Missouri	807	808	817	843	859	876	882	891	898	902
Nebraska	269	271	274	280	282	285	288	291	294	295
North Dakota	119	118	118	118	119	119	119	118	118	117
Ohio	1,779	1,764	1,771	1,784	1,795	1,807	1,817	1,832	1,846	1,857
South Dakota	127	127	129	132	135	143	146	148	150	151
Wisconsin	775	783	798	815	829	844	867	884	895	901
South	14,491	14,605	14,807	15,081	15,355	15,592	15,832	16,104	16,381	16,594
Alabama	725	724	722	722	731	734	733	743	753	762
Arkansas	436	435	436	439	441	444	447	451	454	456
Delaware	97	98	100	102	104	106	108	111	113	115
District of Columbia	85	81	81	81	82	81	81	79	78	76
Florida	1,721	1,790	1,862	1,932	1,981	2,041	2,109	2,173	2,235	2,279
Georgia	1,108	1,127	1,152	1,178	1,207	1,235	1,267	1,296	1,324	1,346
Kentucky	638	631	636	646	655	655	656	660	662	664
Louisiana	787	783	785	794	798	801	793	794	795	794
Maryland	689	699	715	736	752	773	792	816	838	857
Mississippi	503	502	502	504	507	506	504	505	507	507
North Carolina	1,083	1,081	1,087	1,098	1,114	1,133	1,159	1,181	1,207	1,229
Oklahoma	580	579	579	588	597	604	610	615	619	622
South Carolina	616	616	622	627	640	644	647	658	668	676
Tennessee	822	820	825	834	854	867	880	892	905	916
Texas	3,284	3,329	3,383	3,464	3,542	3,608	3,663	3,725	3,792	3,839
Virginia	982	985	999	1,016	1,032	1,045	1,071	1,097	1,122	1,146
West Virginia	336	328	322	320	318	314	312	310	309	308
West	8,644	8,889	9,184	9,479	9,736	9,932	10,174	10,480	10,782	11,036
Alaska	106	109	114	119	122	126	129	133	137	140
Arizona	575	608	640	657	673	709	741	765	789	808
California	4,618	4,772	4,950	5,107	5,249	5,329	5,440	5,626	5,815	5,976
Colorado	560	563	574	593	613	625	641	655	670	683
Hawaii	167	169	172	175	177	180	193	200	205	209
Idaho	215	215	221	226	232	237	240	244	248	251
Montana	152	151	153	156	160	163	166	167	168	168
Nevada	176	187	201	212	223	236	250	260	270	279
New Mexico	292	296	302	309	316	322	332	341	349	355
Oregon	462	472	472	499	510	517	526	538	549	558
Utah	431	439	447	456	464	471	475	480	485	487
Washington	791	810	840	869	896	916	940	969	996	1,020
Wyoming	98	97	98	102	100	101	101	102	102	102

Table 45.—Enrollment in grades K–12 in public elementary and secondary schools, by region and state, with projections: Fall 1988 to fall 2006—Continued

(In thousands)

Region and state	Projected								
	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	46,988	47,365	47,656	47,891	48,102	48,234	48,365	48,497	48,528
Northeast	8,206	8,241	8,254	8,252	8,242	8,214	8,195	8,171	8,122
Connecticut	537	539	540	541	540	539	538	537	534
Maine	217	215	213	211	210	208	207	206	205
Massachusetts	948	949	948	945	941	935	928	921	911
New Hampshire	198	198	197	196	194	193	193	192	191
New Jersey	1,274	1,291	1,305	1,317	1,326	1,332	1,337	1,339	1,337
New York	2,915	2,929	2,935	2,936	2,934	2,925	2,921	2,914	2,898
Pennsylvania	1,855	1,857	1,854	1,847	1,837	1,824	1,815	1,806	1,792
Rhode Island	156	156	156	155	154	154	153	152	151
Vermont	106	106	105	105	104	103	103	103	102
Midwest	10,776	10,797	10,803	10,799	10,791	10,766	10,745	10,733	10,700
Illinois	2,002	2,014	2,024	2,032	2,037	2,039	2,041	2,044	2,042
Indiana	1,006	1,013	1,019	1,025	1,032	1,037	1,037	1,038	1,036
Iowa	505	503	500	497	495	492	489	487	485
Kansas	486	486	486	485	484	483	483	484	485
Michigan	1,699	1,709	1,716	1,720	1,724	1,724	1,725	1,726	1,723
Minnesota	855	853	849	843	837	829	824	821	816
Missouri	902	901	899	895	892	888	885	884	882
Nebraska	295	294	293	293	292	291	290	290	289
North Dakota	115	114	113	112	111	111	110	110	109
Ohio	1,859	1,861	1,861	1,861	1,861	1,857	1,850	1,844	1,834
South Dakota	150	150	148	147	146	144	144	144	144
Wisconsin	901	899	895	888	880	870	865	861	856
South	16,763	16,903	17,020	17,118	17,212	17,280	17,333	17,384	17,401
Alabama	774	785	797	809	820	830	836	841	844
Arkansas	458	459	461	462	464	465	465	466	466
Delaware	117	118	119	121	121	122	122	123	123
District of Columbia	74	73	72	71	71	72	72	72	72
Florida	2,309	2,329	2,338	2,341	2,339	2,332	2,335	2,336	2,333
Georgia	1,364	1,379	1,393	1,404	1,415	1,422	1,429	1,434	1,437
Kentucky	666	668	670	670	672	672	672	672	670
Louisiana	794	793	793	793	795	798	799	802	804
Maryland	874	888	899	908	916	921	926	929	931
Mississippi	505	504	503	504	504	505	505	506	506
North Carolina	1,249	1,267	1,282	1,296	1,308	1,315	1,318	1,320	1,316
Oklahoma	621	619	616	614	613	612	613	614	615
South Carolina	682	689	695	701	707	712	714	716	716
Tennessee	924	931	936	941	945	948	948	948	945
Texas	3,881	3,916	3,946	3,972	3,999	4,022	4,047	4,070	4,090
Virginia	1,165	1,181	1,195	1,208	1,218	1,226	1,230	1,233	1,233
West Virginia	306	305	304	304	304	304	304	303	302
West	11,243	11,424	11,579	11,722	11,858	11,975	12,092	12,210	12,306
Alaska	143	145	147	149	150	151	152	153	153
Arizona	820	828	833	835	834	831	835	839	840
California	6,113	6,235	6,344	6,448	6,550	6,643	6,725	6,809	6,879
Colorado	692	699	704	707	710	711	711	711	710
Hawaii	213	215	217	218	219	219	223	226	229
Idaho	254	257	260	262	265	268	270	272	273
Montana	169	168	168	168	167	167	167	168	168
Nevada	285	290	293	294	294	292	293	294	294
New Mexico	358	361	364	366	368	370	373	376	379
Oregon	566	574	580	586	592	597	602	607	610
Utah	490	493	497	502	508	514	520	527	532
Washington	1,039	1,057	1,071	1,085	1,097	1,108	1,115	1,123	1,129
Wyoming	101	102	102	102	103	104	105	107	108

NOTE: Includes most kindergarten and some nursery school enrollment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Surveys (This table was prepared September 1996.)

Table 46.—Percent change in grades K–12 enrollment in public schools, by region and state, with projections: Fall 1988 to fall 2006

Region and state	Actual	Projected		
	1988 to 1994	1994 to 2000	2000 to 2006	1994 to 2006
United States	10.1	7.7	1.8	9.7
Northeast	8.2	5.8	-1.6	4.1
Connecticut	10.9	5.8	-1.2	4.5
Maine	2.7	-2.4	-3.9	-6.3
Massachusetts	9.2	5.4	-3.9	1.3
New Hampshire	12.5	3.2	-2.8	0.3
New Jersey	8.5	11.3	2.5	14.1
New York	7.7	5.9	-1.3	4.6
Pennsylvania	7.3	4.1	-3.4	0.6
Rhode Island	12.2	3.9	-2.9	0.9
Vermont	11.7	0.9	-2.8	-2.0
Midwest	5.9	3.6	-1.0	2.6
Illinois	6.3	6.1	0.9	7.1
Indiana	0.9	5.1	1.7	6.9
Iowa	4.5	0.1	-3.2	-3.1
Kansas	10.2	3.3	-0.2	3.1
Michigan	3.1	5.1	0.4	5.5
Minnesota	13.8	2.6	-3.8	-1.3
Missouri	9.3	2.0	-2.0	0.0
Nebraska	6.8	2.0	-1.6	0.4
North Dakota	0.2	-5.3	-2.9	-8.1
Ohio	2.1	2.4	-1.5	0.9
South Dakota	14.8	1.9	-3.2	-1.3
Wisconsin	11.9	3.1	-4.4	-1.3
South	9.3	7.5	2.2	9.9
Alabama	1.2	8.6	5.9	15.1
Arkansas	2.5	3.1	1.0	4.1
Delaware	11.5	10.8	2.6	13.7
District of Columbia	-4.6	-11.1	-0.3	-11.4
Florida	22.6	10.9	-0.2	10.6
Georgia	14.3	10.0	3.1	13.4
Kentucky	3.0	2.0	0.1	2.1
Louisiana	0.8	0.0	1.4	1.4
Maryland	15.0	13.4	3.6	17.5
Mississippi	0.2	-0.2	0.4	0.3
North Carolina	7.0	10.7	2.6	13.6
Oklahoma	5.1	1.0	-0.2	0.8
South Carolina	5.1	7.3	3.1	10.6
Tennessee	7.1	6.4	0.9	7.4
Texas	11.5	7.7	3.7	11.7
Virginia	9.0	11.6	3.1	15.1
West Virginia	-7.2	-2.3	-0.8	-3.1
West	17.7	13 8	6.3	20.9
Alaska	21.0	14.2	4.1	18.9
Arizona	29.0	12.3	0.9	13.3
California	17.8	16.6	8.4	26.4
Colorado	14.5	9.8	0.9	10.7
Hawaii	15.4	12.3	5.7	18.7
Idaho	11.8	8.3	5.0	13.7
Montana	8.9	1.4	-0.1	1.3
Nevada	41.4	17.3	0.5	17.9
New Mexico	13.7	9.4	4.2	14.0
Oregon	13.9	10.3	5.2	16.1
Utah	10.1	4.7	7.1	12.1
Washington	18.9	14.0	5.4	20.1
Wyoming	3.3	0.8	6.1	7.0

NOTE: Includes most kindergarten and some nursery school enrollment.

SOURCE: US Department of Education, National Center for Education Statistics, Common Core of Data surveys. (This table was prepared September 1996.)

Table 47.—Enrollment in grades K–8 in public schools, by region and state, with projections: Fall 1988 to fall 2006

(In thousands)

Region and state	Actual						Projected			
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
United States	28,501	29,152	29,878	30,506	31,081	28,083	31,864	32,383	32,837	33,226
Northeast	4,989	5,077	5,189	5,293	5,387	5,486	5,585	5,675	5,751	5,813
Connecticut	332	338	347	355	362	369	378	384	389	393
Maine	149	152	155	157	156	157	157	157	156	154
Massachusetts	578	590	604	616	630	646	661	671	680	687
New Hampshire	120	124	126	130	133	136	140	141	141	141
New Jersey	755	766	784	801	818	844	858	880	902	923
New York	1,761	1,790	1,828	1,862	1,893	1,921	1,953	1,987	2,018	2,041
Pennsylvania	1,133	1,148	1,172	1,195	1,216	1,233	1,254	1,269	1,280	1,287
Rhode Island	95	98	102	104	106	107	109	111	111	112
Vermont	67	69	71	73	74	75	75	76	75	75
Midwest	6,894	6,997	7,130	7,245	7,312	7,357	7,377	7,445	7,486	7,526
Illinois	1,259	1,280	1,310	1,328	1,345	1,356	1,357	1,381	1,404	1,424
Indiana	668	671	676	676	677	679	675	681	686	693
Iowa	334	338	345	348	349	348	345	346	344	343
Kansas	307	314	320	325	328	330	334	336	335	334
Michigan	1,114	1,128	1,145	1,159	1,165	1,160	1,179	1,195	1,204	1,212
Minnesota	511	529	546	557	569	577	583	586	585	584
Missouri	568	576	588	612	622	632	629	633	636	636
Nebraska	191	194	198	201	202	203	203	203	203	203
North Dakota	85	85	85	85	85	84	83	82	80	79
Ohio	1,229	1,239	1,258	1,277	1,284	1,290	1,283	1,289	1,294	1,302
South Dakota	93	94	95	96	98	102	103	103	103	103
Wisconsin	535	549	566	580	588	596	603	610	612	612
South	10,413	10,617	10,859	11,068	11,285	11,441	11,537	11,704	11,864	11,997
Alabama	522	526	527	526	534	536	530	537	545	554
Arkansas	309	311	314	315	318	318	317	319	320	322
Delaware	69	71	73	75	76	77	78	79	81	82
District of Columbia	62	61	61	61	61	61	62	59	58	56
Florida	1,232	1,303	1,370	1,428	1,470	1,515	1,564	1,605	1,638	1,659
Georgia	808	828	849	868	892	910	927	945	963	978
Kentucky	452	452	459	466	470	467	464	466	468	470
Louisiana	581	582	586	591	591	587	576	576	574	573
Maryland	489	507	527	543	556	569	581	598	612	624
Mississippi	368	370	372	370	370	369	364	362	362	362
North Carolina	761	770	783	795	811	828	843	861	879	896
Oklahoma	414	421	425	432	439	441	441	442	441	440
South Carolina	438	444	452	456	467	467	466	473	480	487
Tennessee	586	590	598	605	621	630	634	642	651	659
Texas	2,392	2,443	2,511	2,575	2,634	2,681	2,699	2,729	2,764	2,791
Virginia	699	712	728	741	758	767	781	800	817	833
West Virginia	232	227	224	222	219	216	212	212	211	211
West	6,207	6,461	6,700	6,900	7,096	7,231	7,365	7,558	7,736	7,890
Alaska	79	82	85	89	92	94	95	98	100	102
Arizona	418	451	479	490	498	526	545	559	573	584
California	3,317	3,470	3,615	3,720	3,845	3,904	3,975	4,104	4,230	4,335
Colorado	400	408	420	436	451	460	469	475	481	486
Hawaii	120	123	123	127	129	132	139	143	146	148
Idaho	156	157	160	161	165	167	167	169	171	173
Montana	110	110	111	113	115	117	117	117	116	116
Nevada	127	137	150	158	165	175	184	190	196	200
New Mexico	200	203	208	213	217	226	230	233	236	240
Oregon	328	340	340	359	365	368	373	381	386	391
Utah	319	324	325	327	330	330	328	330	330	332
Washington	563	586	613	633	652	660	672	688	702	715
Wyoming	70	70	71	74	72	71	70	70	70	69

Table 47.—Enrollment in grades K–8 in public schools, by region and state, with projections: Fall 1988 to fall 2006—Continued

(In thousands)

Region and state	Projected								
	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	33,522	33,692	33,852	34,029	34,098	34,065	33,882	33,680	33,507
Northeast	5,838	5,836	5,823	5,807	5,768	5,711	5,635	5,556	5,478
Connecticut	395	395	394	393	390	387	382	378	374
Maine	152	150	147	146	144	143	141	140	139
Massachusetts	685	680	675	668	659	648	635	622	609
New Hampshire	140	138	137	135	133	132	130	129	127
New Jersey	938	948	956	962	962	959	951	940	929
New York	2,053	2,055	2,054	2,052	2,040	2,021	1,994	1,965	1,937
Pennsylvania	1,289	1,284	1,277	1,269	1,259	1,244	1,226	1,209	1,191
Rhode Island	112	111	110	109	108	106	105	103	101
Vermont	74	74	73	73	73	72	71	71	71
Midwest	7,547	7,540	7,535	7,540	7,528	7,492	7,429	7,368	7,306
Illinois	1,434	1,439	1,443	1,449	1,450	1,446	1,435	1,421	1,408
Indiana	701	707	713	719	723	724	719	714	707
Iowa	342	340	338	338	336	334	330	328	325
Kansas	335	334	334	335	335	335	334	334	334
Michigan	1,223	1,226	1,230	1,234	1,235	1,232	1,222	1,214	1,207
Minnesota	581	576	570	566	562	556	550	546	542
Missouri	634	630	626	623	620	616	611	606	602
Nebraska	202	201	201	201	200	200	198	197	196
North Dakota	77	76	75	74	74	74	73	73	73
Ohio	1,306	1,304	1,303	1,304	1,300	1,293	1,279	1,264	1,249
South Dakota	103	102	102	101	101	100	100	99	98
Wisconsin	610	605	599	595	590	584	578	573	567
South	12,112	12,184	12,258	12,341	12,383	12,391	12,336	12,270	12,218
Alabama	566	577	587	597	605	611	611	610	609
Arkansas	323	324	326	327	329	329	327	324	322
Delaware	83	84	85	86	86	86	85	84	84
District of Columbia	54	52	51	50	50	49	49	48	48
Florida	1,670	1,674	1,676	1,677	1,670	1,659	1,645	1,630	1,619
Georgia	993	1,004	1,014	1,022	1,026	1,027	1,022	1,017	1,013
Kentucky	474	473	475	479	480	480	477	474	471
Louisiana	572	570	569	572	575	577	576	575	575
Maryland	635	644	651	657	660	660	657	652	649
Mississippi	363	363	363	366	367	368	365	363	360
North Carolina	911	920	928	935	937	935	926	916	907
Oklahoma	437	434	432	432	432	431	429	427	426
South Carolina	493	498	502	507	510	511	507	503	500
Tennessee	665	668	670	673	674	671	665	659	652
Texas	2,818	2,836	2,857	2,881	2,899	2,915	2,920	2,920	2,925
Virginia	844	852	859	866	869	869	863	856	850
West Virginia	212	213	213	214	215	214	213	211	208
West	8,025	8,132	8,236	8,340	8,419	8,470	8,483	8,486	8,506
Alaska	104	105	106	107	108	108	108	108	108
Arizona	592	596	598	600	600	597	594	590	587
California	4,426	4,499	4,569	4,639	4,692	4,732	4,745	4,749	4,768
Colorado	489	491	493	494	495	494	492	489	486
Hawaii	150	152	155	157	158	160	161	162	164
Idaho	175	178	181	184	186	188	188	189	189
Montana	116	116	116	116	116	116	116	116	116
Nevada	203	205	206	206	206	204	203	202	202
New Mexico	243	246	249	252	255	257	257	257	257
Oregon	396	400	404	409	412	415	415	416	418
Utah	336	340	345	351	356	360	363	367	370
Washington	726	736	745	755	762	766	766	766	766
Wyoming	69	69	69	70	71	72	73	74	75

NOTE: Includes most kindergarten and some nursery school enrollment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Surveys. (This table was prepared September 1996.)

Table 48.—Percent change in grades K–8 enrollment in public schools, by region and state, with projections: Fall 1988 to fall 2006

Region and state	Actual	Projected		
	1988 to 1994	1994 to 2000	2000 to 2006	1994 to 2006
United States	11.8	6.2	-1.0	5.2
Northeast	12.0	4.3	-5.9	-1.9
Connecticut	14.0	4.2	-5.2	-1.2
Maine	5.7	-6.3	-5.9	-11.9
Massachusetts	14.4	2.1	-9.8	-7.9
New Hampshire	16.5	-2.2	-6.7	-8.7
New Jersey	13.6	11.5	-2.8	8.3
New York	10.9	5.2	-5.7	-0.8
Pennsylvania	10.7	1.8	-6.7	-5.0
Rhode Island	14.9	0.3	-7.6	-7.3
Vermont	12.7	-2.3	-3.8	-6.1
Midwest	7.0	2.1	-3.0	-1.0
Illinois	7.8	6.3	-2.5	3.7
Indiana	1.1	5.6	-0.7	4.8
Iowa	3.2	-1.9	-4.0	-5.8
Kansas	9.0	0.0	-0.2	-0.2
Michigan	5.9	4.4	-1.9	2.4
Minnesota	14.0	-2.2	-5.0	-7.0
Missouri	10.7	-0.5	-3.8	-4.3
Nebraska	6.0	-1.0	-2.6	-3.5
North Dakota	-2.4	-9.9	-3.0	-12.6
Ohio	4.4	1.5	-4.2	-2.7
South Dakota	10.8	-0.8	-3.2	-4.0
Wisconsin	12.7	-0.6	-5.4	-6.0
South	10.8	6.3	-0.3	5.9
Alabama	1.5	10.9	3.8	15.0
Arkansas	2.6	2.6	-1.0	1.6
Delaware	12.6	9.2	-1.3	7.8
District of Columbia	-0.9	-17.5	-5.4	-22.0
Florida	26.9	7.2	-3.4	3.6
Georgia	14.7	9.4	-0.1	9.3
Kentucky	2.6	2.6	-1.0	1.5
Louisiana	-0.8	-1.2	1.0	-0.2
Maryland	18.8	11.9	-0.3	11.6
Mississippi	-1.1	0.0	-0.9	-1.0
North Carolina	10.8	10.1	-2.3	7.6
Oklahoma	6.7	-2.1	-1.4	-3.5
South Carolina	6.4	7.8	-0.4	7.4
Tennessee	8.2	5.7	-2.7	2.9
Texas	12.8	5.9	2.4	8.4
Virginia	11.7	10.1	-1.1	8.8
West Virginia	-8.5	0.5	-2.3	-1.8
West	18.7	11.8	3.3	15.5
Alaska	20.9	11.5	1.8	13.4
Arizona	30.6	9.7	-1.9	7.6
California	19.8	14.9	4.4	20.0
Colorado	17.2	5.1	-1.4	3.7
Hawaii	15.4	11.2	6.3	18.2
Idaho	7.5	8.1	4.6	13.0
Montana	7.2	-1.6	0.4	-1.3
Nevada	44.5	11.8	-1.9	9.6
New Mexico	14.7	8.5	3.1	11.9
Oregon	13.7	8.2	3.4	11.9
Utah	2.8	5.2	7.2	12.8
Washington	19.3	11.0	2.8	14.1
Wyoming	-0.1	-1.4	7.5	6.0

NOTE: Includes most kindergarten and some nursery school enrollment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data surveys. (This table was prepared September 1996.)

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